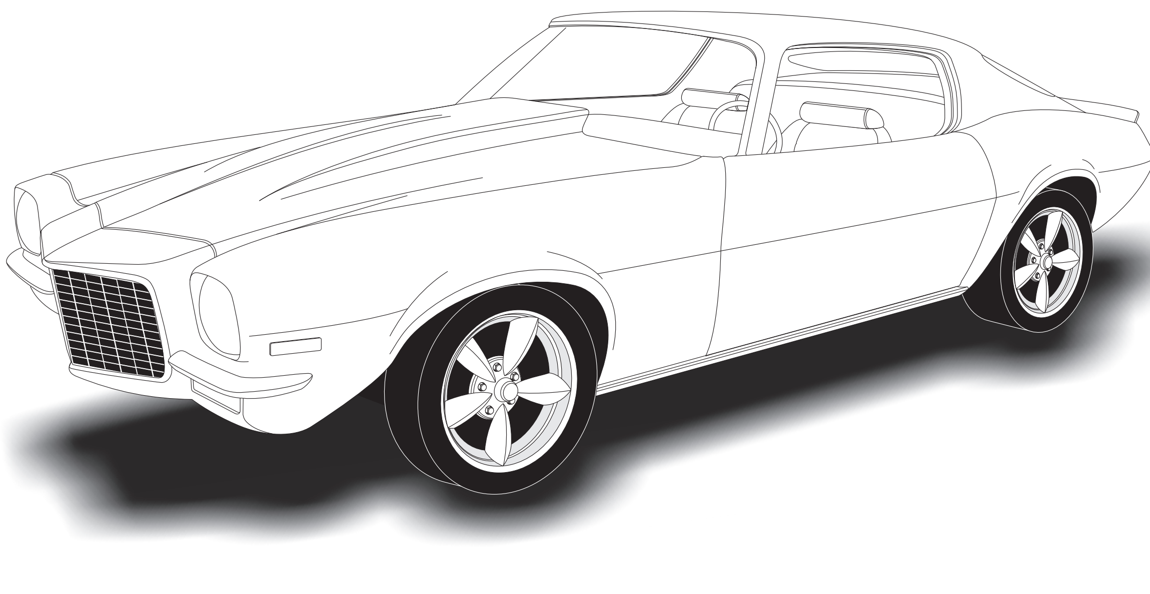
1970-78 CHEVY CAMARO

w/o FACTORY AIR GEN IV

561170



18865 GOLL ST. - SAN ANTONIO, TX. - 78266 ph.210-654-7171 - fax 210-654-3113

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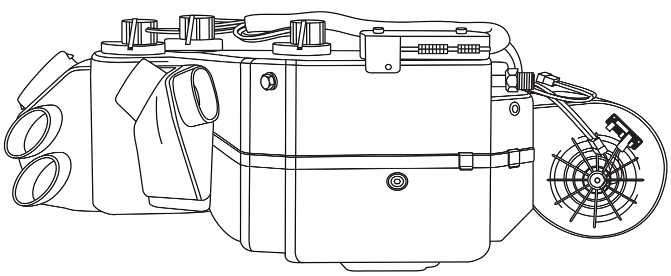
EVAPORATOR KIT PACKING LIST

EVAPORATOR KIT 561170

No.	QTY.	PART No.	DESCRIPTION
1.	1	744004-VUE	GEN IV 4 VENT EVAP SUBCASE
2.	1	781171	1970-78 CAMARO w/o AC GEN IV ACC. KIT

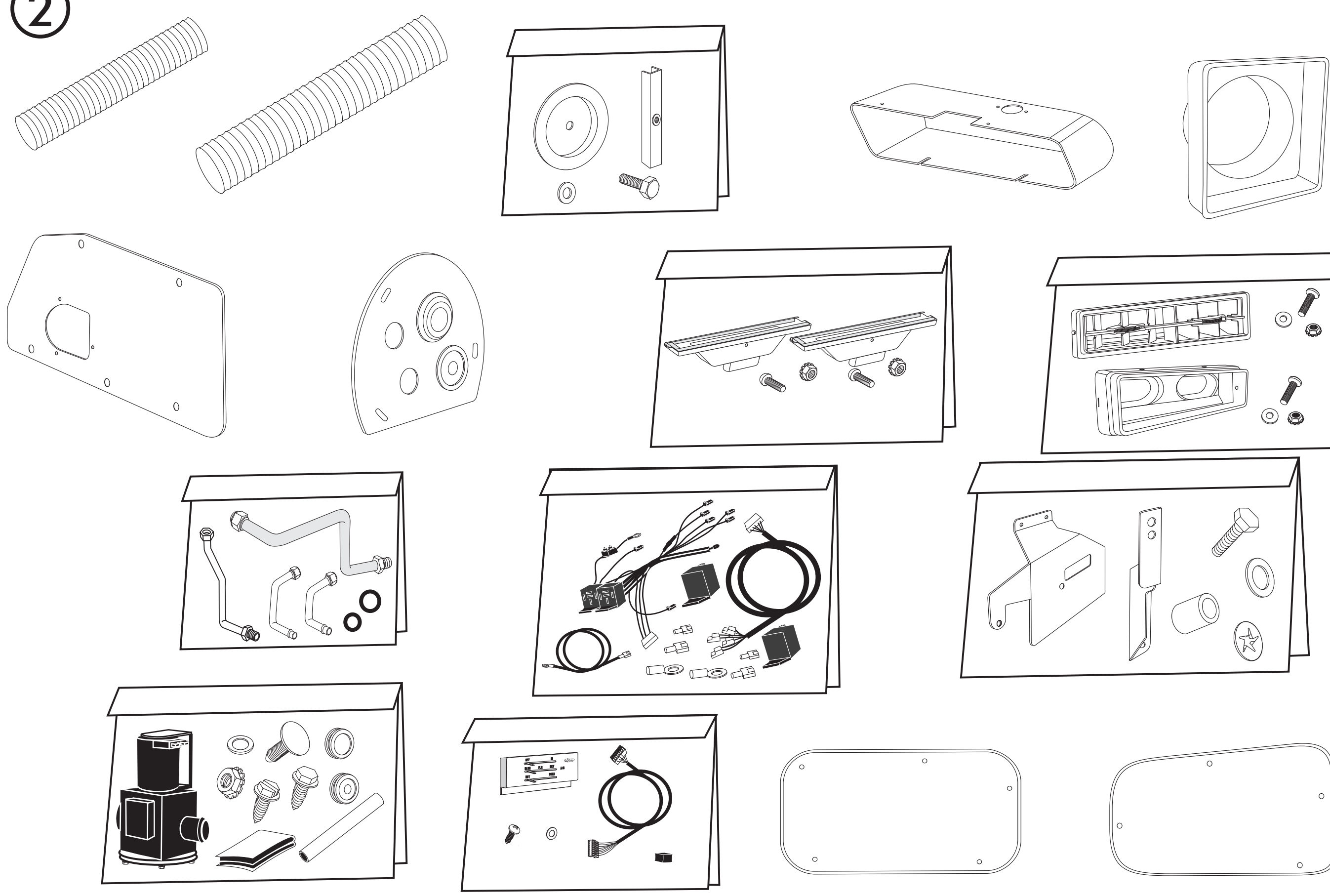
***** BEFORE BEGINNING INSTALLATION OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.***

①



GEN IV 4 VENT
EVAP. SUB CASE
744004-VUE

②



ACCESSORY KIT
781171

NOTE: IMAGES MAY NOT DEPICT ACTUAL PARTS AND QUANTITIES. REFER TO PACKING LIST FOR ACTUAL PARTS AND QUANTITIES

1970-78 CAMARO
w/o FACTORY AIR

IMPORTANT NOTICE-PLEASE READ

FOR MAXIMUM SYSTEM PERFORMANCE VINTAGE AIR RECOMMENDS THE FOLLOWING:

THIS KIT DOES NOT CONTAIN HEATER HOSE. YOU MUST PURCHASE 8 FEET OF 5/8" DIA. HEATER HOSE FROM VINTAGE AIR(31800-VUD) OR FROM YOU LOCAL PARTS RETAILER

SAFETY SWITCHES:

YOUR VINTAGE AIR SYSTEM IS EQUIPPED WITH A BINARY PRESSURE SAFETY SWITCH. A BINARY SWITCH (11078-VUS) DISENGAGES THE COMPRESSOR CLUTCH IN CASE OF EXTREME LOW PRESSURE CONDITION (REFRIGERANT LOSS) OR EXCESSIVELY HIGH HEAD PRESSURE (406 PSI), TO PREVENT COMPRESSOR DAMAGE OR HOSE RUPTURE. A TRINARY SWITCH (11076-VUS) COMBINES HI/LO PRESSURE PROTECTION WITH AN ELECTRIC FAN OPERATION SIGNAL AT 254 PSI., AND MAY BE SUBSTITUTED FOR USE WITH ELECTRIC CONDENSER FANS. COMPRESSOR SAFETY SWITCHES ARE EXTREMELY IMPORTANT SINCE AN A/C SYSTEM RELIES ON REFRIGERANT TO CARRY LUBRICATION THROUGH THE SYSTEM.

SERVICE INFO:

ATTENTION: SYSTEM COMPONENTS: THE COMPRESSOR, EVAPORATOR, CONDENSER & DRIER ARE CAPPED. CAPS MAY BE UNDER PRESSURE WITH DRY NITROGEN; BE CAREFUL REMOVING CAPS. DO NOT REMOVE CAPS PRIOR TO INSTALLATION. REMOVING CAPS PRIOR TO INSTALLATION WILL CAUSE COMPONENTS TO COLLECT MOISTURE AND LEAD TO PREMATURE FAILURE AND REDUCED PERFORMANCE.

EVACUATE THE SYSTEM FOR 35-45 MINUTES WITH SYSTEM COMPONENTS (DRIER, COMPRESSOR, EVAPORATOR AND CONDENSER) AT A TEMPERATURE OF AT LEAST 85° F. ON A COOL DAY THE COMPONENTS CAN BE HEATED WITH A HEAT GUN OR BY RUNNING THE ENGINE WITH THE HEATER ON BEFORE EVACUATING. LEAK CHECK AND CHARGE TO SPECIFICATIONS.

VINTAGE AIR SYSTEMS ARE DESIGNED TO OPERATE WITH R134a or R-12 REFRIGERANT ONLY ! USE OF ANY OTHER REFRIGERANTS RISKS A DANGER OF FIRE AND COULD DAMAGE EITHER YOUR AIR CONDITIONING SYSTEM OR YOUR VEHICLE.

USE OF ANY OTHER REFRIGERANTS WILL VOID ALL WARRANTIES OF THE AIR CONDITIONING SYSTEM AND COMPONENTS. USE OF THE PROPER TYPE AND AMOUNT OF REFRIGERANT IS CRITICAL TO PROPER SYSTEM OPERATION. VINTAGE AIR RECOMMENDS OUR SYSTEMS BE CHARGED BY WEIGHT WITH A QUALITY CHARGING STATION OR SCALE.

REFRIGERANT CAPACITIES FOR VINTAGE AIR SYSTEMS

(FOR OTHER SYSTEMS, CONSULT MANUFACTURER GUIDELINES)

134a SYSTEM

CHARGE WITH 1.8 lbs.
(1lbs. 12ozs) OF REFRIGERANT

R-12 SYSTEM

CHARGE WITH 2.0 lbs. OF REFRIGERANT

LUBRICANT CAPACITIES: NEW COMPRESSOR - NO ADDITIONAL OIL NEEDED
USED COMPRESSOR - CONSULT VINTAGE AIR

IMPORTANT *WIRING* NOTICE-PLEASE READ

SOME VEHICLES MAY HAVE HAD SOME OR ALL OF THEIR RADIO INTERFERENCE CAPACITORS REMOVED. THERE SHOULD BE A CAPACITOR FOUND AT EACH OF THE FOLLOWING LOCATIONS:

1. ON THE POSITIVE TERMINAL OF THE IGNITION COIL
2. IF THERE IS A GENERATOR, ON THE ARMATURE TERMINAL OF THE GENERATOR
3. IF THERE IS A GENERATOR, ON THE BATTERY TERMINAL OF THE VOLTAGE REGULATOR

MOST ALTERNATORS HAVE A CAPACITOR INSTALLED INTERNALLY TO ELIMINATE WHAT IS CALLED 'WHINING' AS THE ENGINE IS REVVED. IF WHINING IS HEARD IN THE RADIO, OR JUST TO BE EXTRA CAUTIOUS, A RADIO INTERFERENCE CAPACITOR CAN BE ADDED TO THE BATTERY TERMINAL OF THE ALTERNATOR.

IT IS ALSO IMPORTANT THAT THE BATTERY LEAD IS IN GOOD SHAPE AND THAT THE GROUND LEADS ARE NOT COMPROMISED. THERE SHOULD BE A HEAVY GROUND FROM THE BATTERY TO THE ENGINE BLOCK, AND ADDITIONAL GROUNDS TO THE BODY AND TO THE CHASSIS.

IF THESE PRECAUTIONS ARE NOT OBSERVED, IT IS POSSIBLE FOR VOLTAGE SPIKES TO BE PRESENT ON THE BATTERY LEADS. THESE SPIKES COME FROM IGNITION SYSTEMS, CHARGING SYSTEMS, AND FROM TURNING SOME OF THE VEHICLE'S OTHER SYSTEMS ON AND OFF. MODERN COMPUTER OPERATED EQUIPMENT CAN BE SENSITIVE TO VOLTAGE SPIKES ON THEIR POWER LEADS, WHICH CAN CAUSE UNEXPECTED RESETS, STRANGE BEHAVIOR, AND MAY ALSO CAUSE PERMANENT DAMAGE.

VINTAGE AIR STRIVES TO HARDEN THEIR PRODUCTS AGAINST THESE TYPES OF ELECTRICAL NOISE, BUT THERE IS A POINT WHERE A VEHICLE'S ELECTRICAL SYSTEM CAN BE DEGRADED SO MUCH THAT NOTHING CAN HELP.

RADIO INTERFERENCE CAPACITORS SHOULD BE AVAILABLE AT MOST AUTO & TRUCK PARTS SUPPLIERS. THEY TYPICALLY ARE CYLINDRICAL IN SHAPE, A LITTLE OVER AN INCH LONG, A LITTLE OVER A HALF INCH IN DIAMETER, THEY HAVE A SINGLE LEAD COMING FROM ONE END OF THE CYLINDER WITH A TERMINAL ON THE END OF THE WIRE, AND THEY WILL HAVE A MOUNTING CLIP WHICH IS SCREWED INTO A GOOD GROUND ON THE VEHICLE. THE SPECIFIC VALUE OF THE CAPACITANCE IS NOT TOO SIGNIFICANT, IN COMPARISON TO IGNITION CAPACITORS THAT ARE MATCHED WITH THE COIL TO REDUCE PITTING OF THE POINTS.

- CARE MUST BE TAKEN WHEN INSTALLING THE COMPRESSOR LEAD, NOT TO SHORT IT TO GROUND. THE COMPRESSOR LEAD MUST NOT BE CONNECTED TO A CONDENSER FAN OR ANY OTHER AUXILIARY DEVICE. SHORTING TO GROUND OR CONNECTING TO A CONDENSER FAN OR ANY OTHER AUXILIARY DEVICE WILL CAUSE SEVERE DAMAGE TO THE ECU.
- WHEN INSTALLING GROUND LEADS ON GEN IV SYSTEMS, THE BLOWER CONTROL GROUND AND ECU GROUND MUST BE CONNECTED DIRECTLY TO THE NEGATIVE BATTERY POST.
- THE HEATER CONTROL VALVE IS A NORMALLY OPEN VALVE. IT MUST BE CONNECTED TO THE ECU TO BLOCK WATER FLOW IN AC MODE.

BEFORE STARTING THE INSTALLATION, CHECK THE FUNCTION OF THE VEHICLE (HORN, LIGHTS,ETC.) FOR PROPER OPERATIONS. STUDY THE INSTRUCTIONS, ILLUSTRATIONS, & DIAGRAMS.

ENGINE COMPARTMENT

REMOVE THE FOLLOWING:

☐ BATTERY AND BATTERY TRAY (RETAIN). SEE FIGURE 1.
☐ DRAIN RADIATOR
☐ HOOD LATCH ASSEMBLY (RETAIN) INCLUDING HOOD LATCH SUPPORT
☐ HEATER BLOWER MOTOR ASSEMBLY (DISCARD). TO REMOVE THE HEATER BLOWER MOTOR ASSEMBLY (UNDER HOOD) AND THE AIR DISTRIBUTION SYSTEM (UNDER DASH), THE FACTORY MANUAL INDICATES DOING THE FOLLOWING: ***"REMOVE RIGHT LOWER ROCKER MOLDING. REMOVE LOWER FENDER ATTACHING BOLTS. REMOVE SKIRT TO FENDER AND SKIRT TO REINFORCEMENT SCREWS. PULL OUT ON LOWER PORTION OF FENDER, MOVING THE SKIRT AWAY FROM THE FENDER FLANGE AND FIREWALL. BLOCK THE SKIRT WITH A 2 x 4 BLOCK OF WOOD".**** TO AVOID DAMAGE TO PAINT AND SHEET METAL, AND FOR EASE OF REMOVAL AND REPLACEMENT OF COMPONENTS; VINTAGE AIR SUGGESTS THAT THE RIGHT FENDER BE REMOVED AND INNER PANEL BE LOWERED. SEE FIGURE 1.
☐ OEM HEATER HOSES (DISCARD). SEE FIGURE 1.
☐ REMOVE OEM HEATER WIRING/VACUUM HARNESS MOLDED GROMMET. SEE FIGURE 1.
☐ INSTALL 1 ½" PLUG IN FIREWALL. SEE FIGURE 1a BELOW.

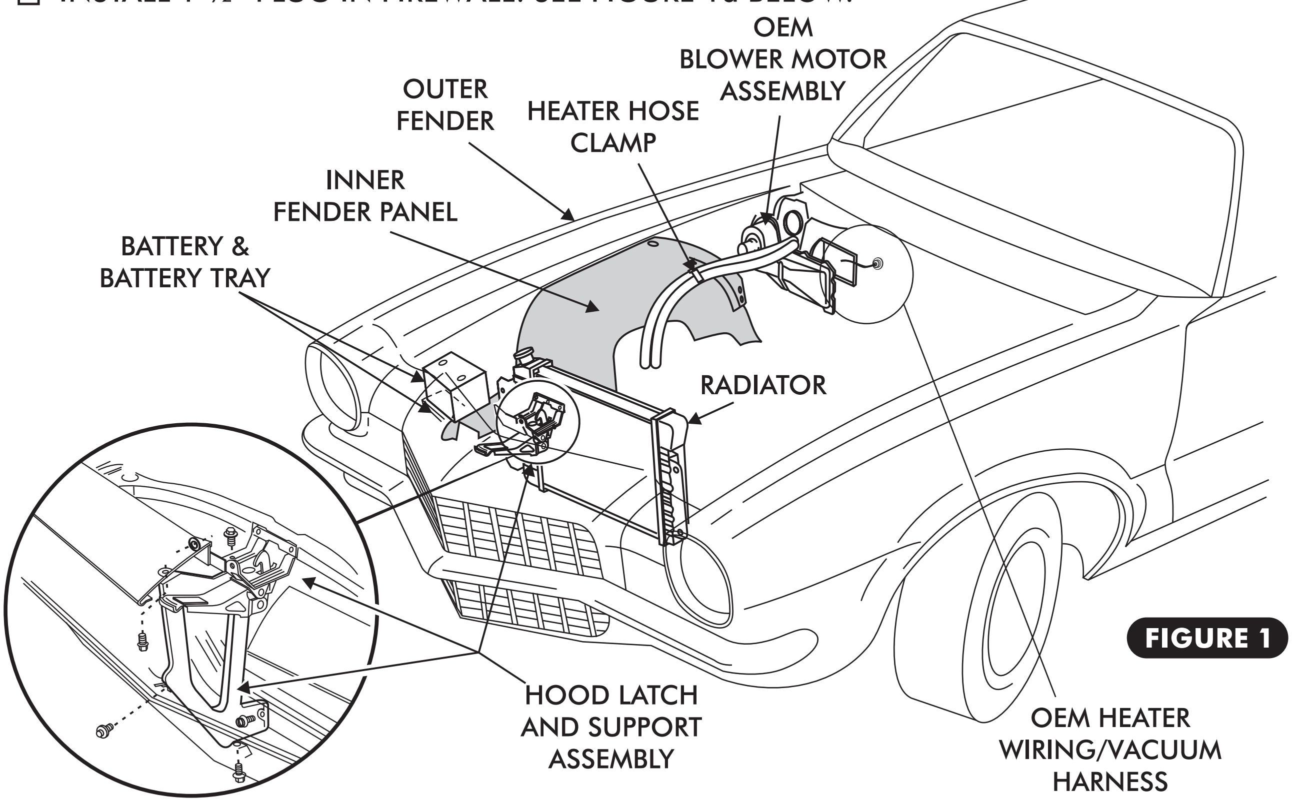


FIGURE 1

CONDENSER ASSEMBLY & INSTALLATION

☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE CONDENSER KIT TO INSTALL THE CONDENSER.
☐ BINARY SWITCH INSTALLATION (REFER TO CONDENSER INSTRUCTIONS)

COMPRESSOR & BRACKETS

☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE BRACKET KIT TO INSTALL THE COMPRESSOR BRACKET.

PULLEYS

☐ IN MOST INSTANCES THE BELT LENGTHS WILL REMAIN THE SAME.

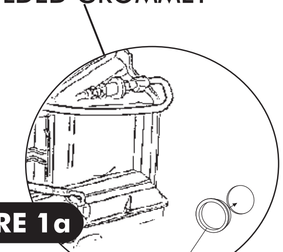


FIGURE 1a

33173-VUI
1 ½" PLUG

PASSENGER COMPARTMENT

NOTE: REMOVAL OF DASHBOARD IS REQUIRED TO INSTALL THE EVAPORATOR. VINTAGE AIR RECOMMENDS THAT YOU UTILIZE THE FACTORY SERVICE MANUAL WHEN YOU DISASSEMBLE AND REASSEMBLE THE DASHBOARD.

REMOVE THE FOLLOWING:

- ☐ GLOVE BOX DOOR. SEE FIGURE 3.
- ☐ GLOVE BOX SHELL (DISCARD, RETAIN SCREWS). SEE FIGURE 2.
- ☐ HEATER ASSEMBLY AND ALL RELATED DUCTING (DISCARD), RETAIN SCREWS. SEE FIGURE 3.
- ☐ DR/ PASS LOUVER OUTLETS (RETAIN). INSTRUMENT PANEL MUST BE REMOVED TO GET TO LEFT OUTLET, AND CONTROL PANEL (SEE FIGURE 3).
- ☐ CONTROL PANEL ASSEMBLY (RETAIN CONTROL PANEL) SEE FIGURE 3. REFER TO CONTROL PANEL CONVERSION KIT INSTRUCTIONS FOR INSTALLATION OF CONTROLS.
- ☐ REMOVE DR/PASS SIDE KICK PANEL (RETAIN). DISCONNECT PASS SIDE FRESH AIR CABLE FROM PANEL (SEE FIGURE 3). DISCONNECT DR/ PASS CABLE FROM ASTRO- VENTILATION DUCTING (DISCARD).
- ☐ REMOVE OEM DEFROST DUCT ASM (DISCARD).

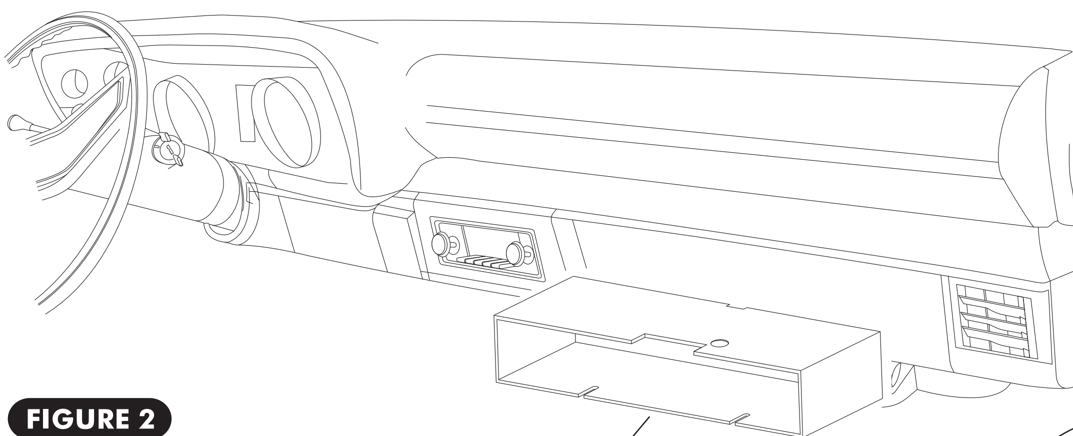


FIGURE 2

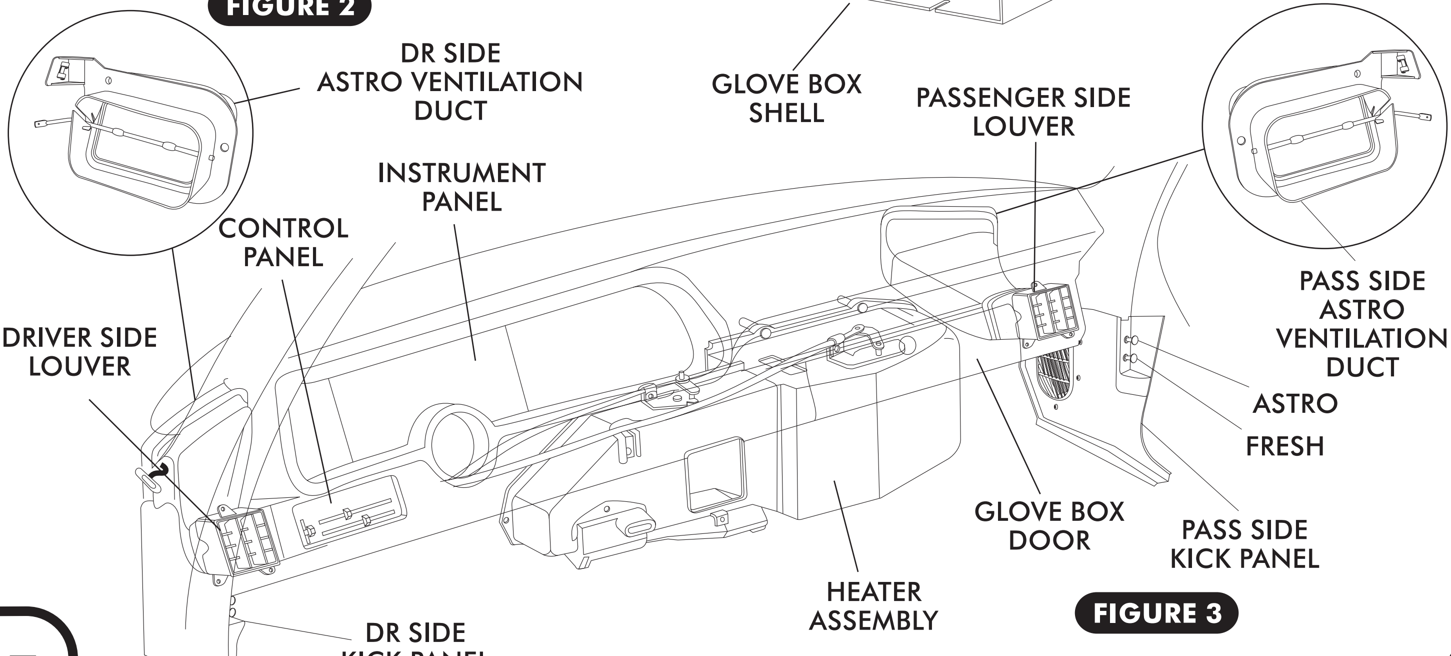


FIGURE 3

EVAPORATOR MOUNTING HOLES

- ☐ LOOSEN WIRE LOOM MOUNTING SCREWS. SEE FIGURE 4 BELOW
- ☐ CUT OUT TEMPLATE PROVIDED ON PAGE 26. SLIDE THE TOP OF TEMPLATE UNDER WIRE LOOM ON INNER COWL. ALIGN THE (3) HOLES IN TEMPLATE WITH THE OEM HOLES IN INNER COWL. ALIGN TOP EDGE OF THE TEMPLATE ALONG THE TOP EDGE OF INNER COWL AS SHOWN BELOW IN FIGURE 4.
- ☐ ONCE TEMPLATE IS ALIGNED CORRECTLY AND TAPED INTO PLACE MARK MOUNTING HOLES ON INNER COWL. ONCE HOLES ARE MARKED IN THE CORRECT LOCATION REMOVE TEMPLATE, AND DRILL (2) 3/16" HOLES IN INNER COWL FOR EVAPORATOR FRONT MOUNTING BRACKET. SEE FIGURE 4 BELOW.
- ☐ RE-TIGHTEN WIRE LOOM MOUNTING SCREW.

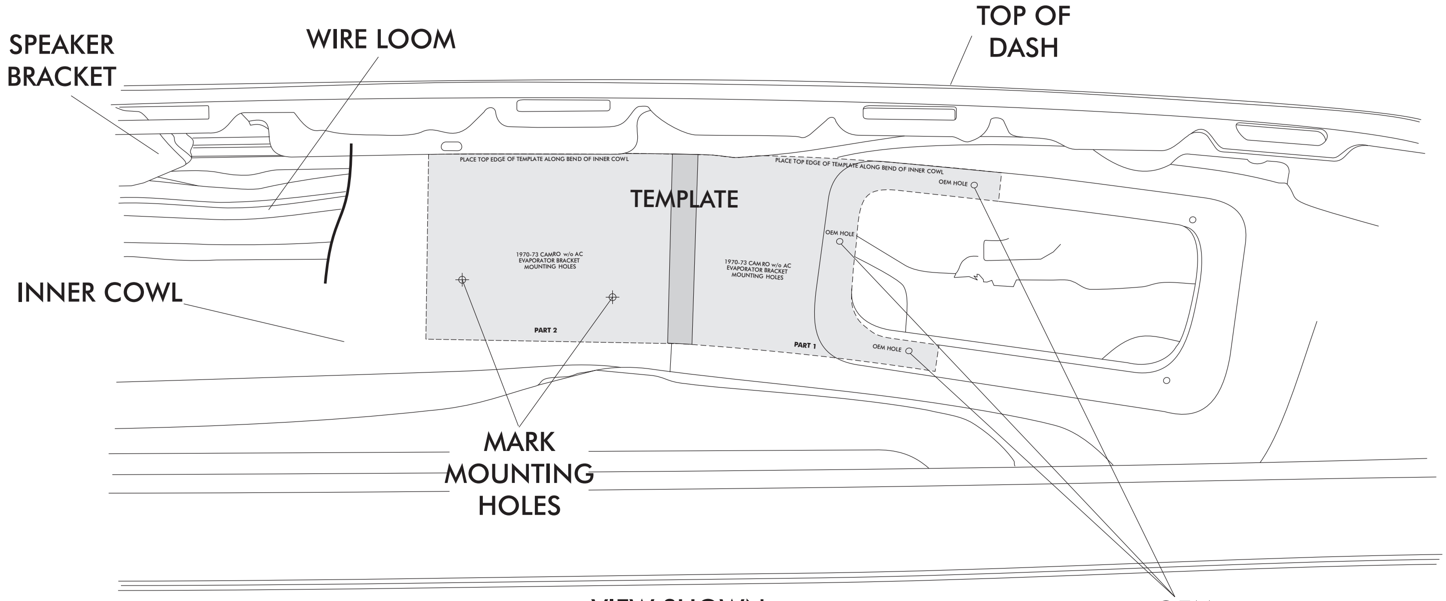


FIGURE 4

DEFROST DUCT/ FRESH AIR COVER INSTALLATION

- ☐ INSTALL THE DEFROST DUCTS UNDER DASH ON OEM DEFROST DUCT MOUNTING FLANGE AS SHOWN IN FIGURE 5 BELOW. SECURE USING 10/24 x 3/8" PAN HEAD SCREW AND 10/24 NUT w/ STAR WASHER.
- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE DR/ PASS SIDE FRESH AIR CAPS AS SHOWN IN FIGURE 5a BELOW.
- ☐ INSTALL DR/ PASS SIDE FRESH AIR CAPS SECURE USING OEM SCREWS SEE FIGURE 5 BELOW

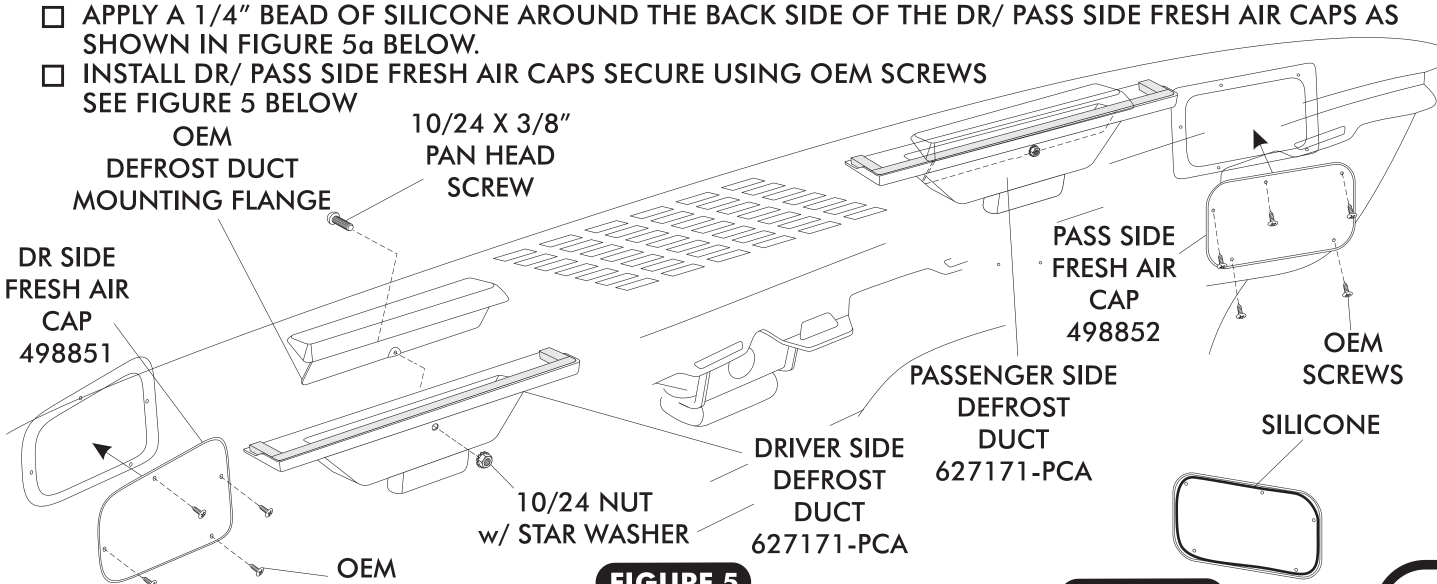


FIGURE 5

FIGURE 5a

HOSE ADAPTER INSTALLATION

- ☐ INSTALL (2) S-CLIPS ON HOSE ADAPTERS AS SHOWN IN FIGURE 6 BELOW.
- ☐ INSTALL DRIVER & PASSENGER SIDE HOSE ADAPTERS ON OEM LOUVERS. SEE FIGURE 6 BELOW

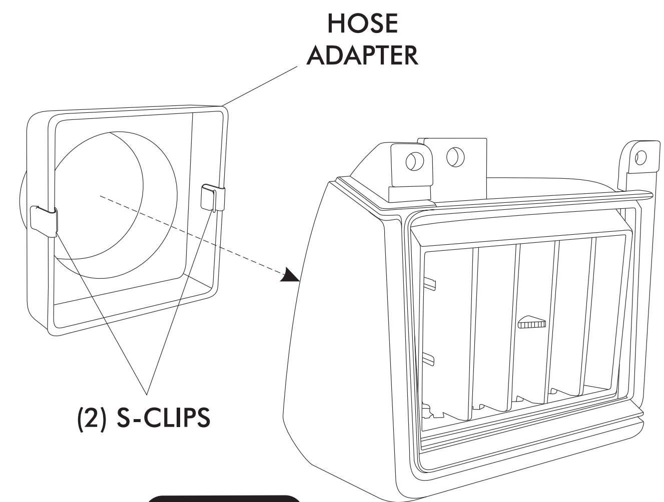


FIGURE 6

FRESH AIR CAP INSTALLATION

- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FRESH AIR CAP AS SHOWN IN FIGURE 7, BELOW.
- ☐ ATTACH FRESH AIR CAP TO FIREWALL USING A 1/4-20 x 1" BOLT AND WASHER, SEE FIGURE 7, BELOW.

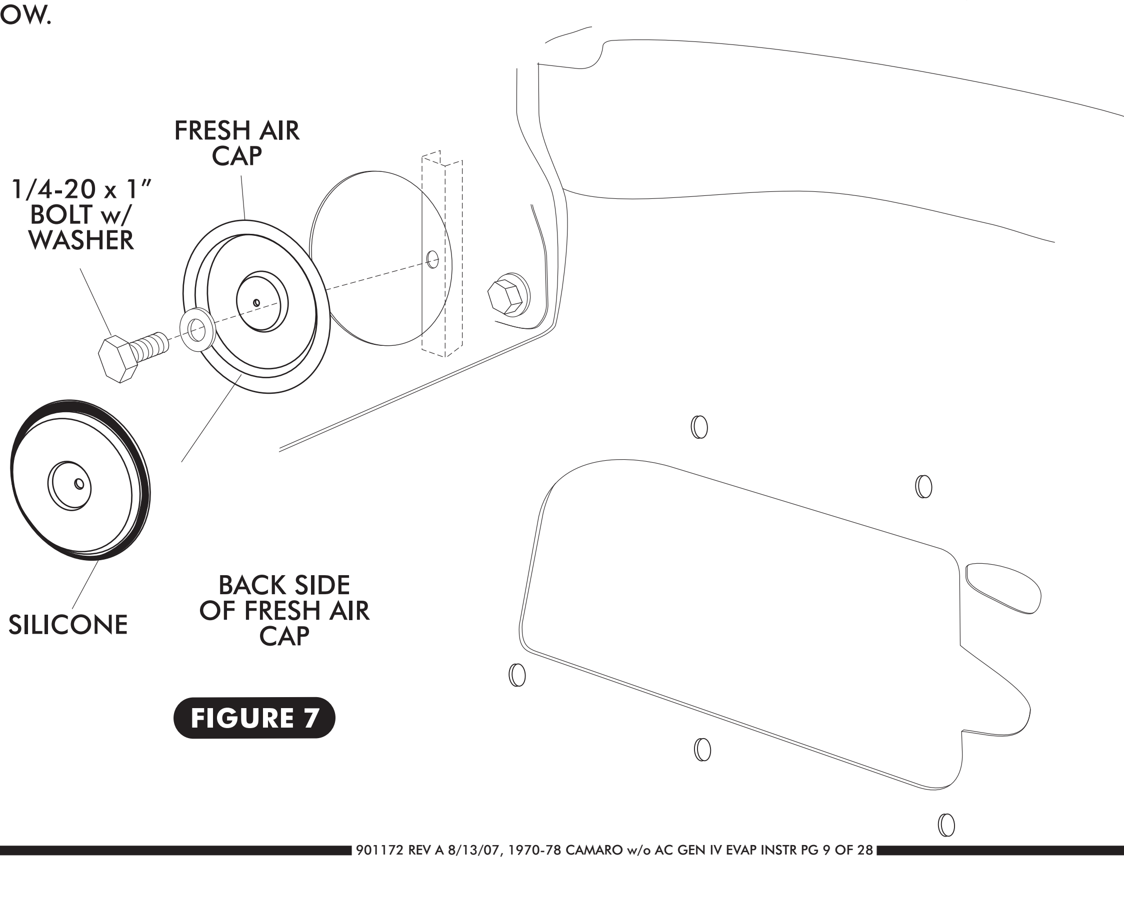


FIGURE 7

KICK PANEL INSTALLATION

- ☐ REMOVE THE KICK PANEL BY REMOVING THE (5) OEM SCREWS, DISCONNECT THE FRESH AIR DOOR FROM THE LEVER HOUSING, CLOSE FRESH AIR DOOR ASSEMBLY IN KICK PANEL AND SEAL DOOR w/ 1/4" BEAD OF SILICONE AROUND DOOR AS SHOWN IN FIGURE 8.
- ☐ INSTALL KICK PANEL USING OEM SCREWS AS SHOWN IN FIGURE 8a.

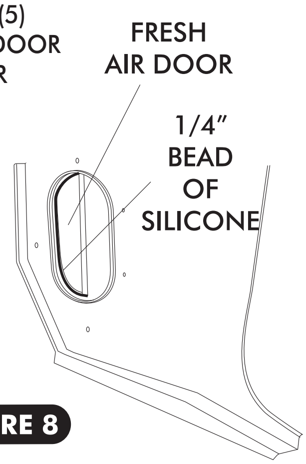


FIGURE 8

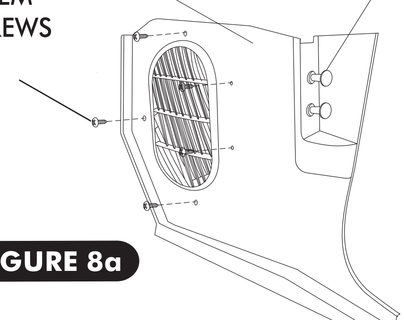


FIGURE 8a

FIREWALL COVER INSTALLATION

- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FIREWALL COVER AS SHOWN IN FIGURE 10, PAGE 11.
- ☐ FROM INSIDE THE CAR, INSTALL FIREWALL COVER ON FIREWALL SEE FIGURE 10, PAGE 11. FROM THE ENGINE COMPARTMENT SECURE FIREWALL COVER TO FIREWALL USING (4) 1/4-20 x 1" HEX BOLTS WITH WASHER. SEE FIGURE 10, PAGE 11

EVAPORATOR INSTALLATION

- ☐ ON A WORK BENCH, INSTALL EVAPORATOR REAR BRACKET AND HARDLINES WITH PROPERLY LUBRICATED O-RINGS. (SEE FIGURE 16, PAGE 15, AND FIGURES 22, PAGE 20.)
- ☐ INSTALL FRONT MOUNTING BRACKET ON EVAPORATOR USING (2) 1/4-20 x 1/2" HEX BOLTS AND TIGHTEN AS SHOWN IN FIGURE 9 BELOW.
- ☐ LIFT EVAPORATOR UNIT UP UNDER THE DASHBOARD SEE FIGURE 11, PAGE 11. SECURE LOOSELY TO THE FIREWALL FROM THE ENGINE COMPARTMENT SIDE USING A 1/4-20 NUT AND WASHER, SEE FIGURE 11, PAGE 11.
- ☐ USING (2) #14 x 3/4" SHEET METAL SCREW SECURE THE FRONT EVAPORATOR MOUNTING BRACKET TO THE INNER COWL. SEE FIGURE 11, PAGE11.
- ☐ VERIFY THAT EVAPORATOR UNIT IS LEVEL AND SQUARE TO THE DASH, THEN TIGHTEN ALL MOUNTING BOLTS. (***NOTE***: *TIGHTEN THE BOLT ON FIREWALL FIRST, THEN THE FRONT MOUNTING BRACKET SCREWS.)*

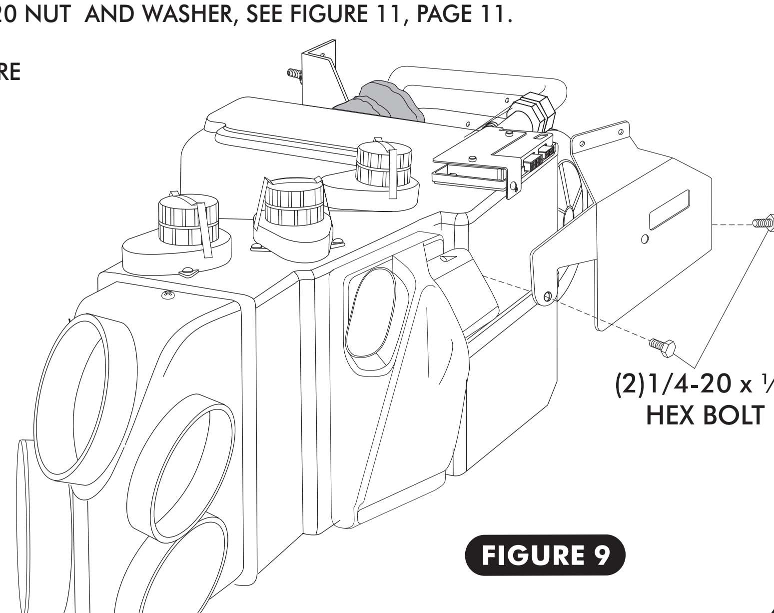


FIGURE 9

FIREWALL COVER INSTALLATION

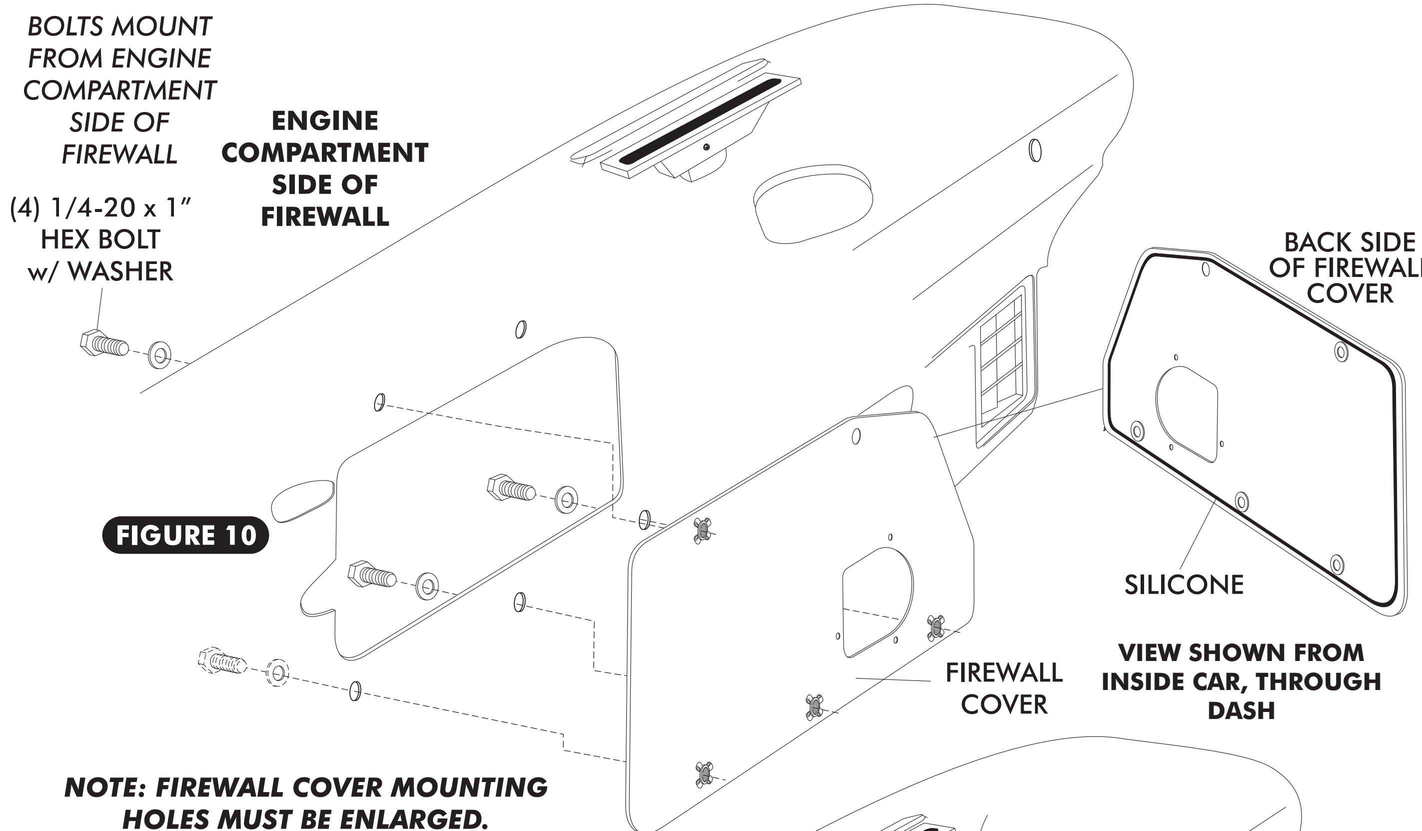


FIGURE 10

NOTE: FIREWALL COVER MOUNTING HOLES MUST BE ENLARGED. ENLARGE EXISTING HOLES IN FIREWALL TO 5/16"

EVAPORATOR INSTALLATION

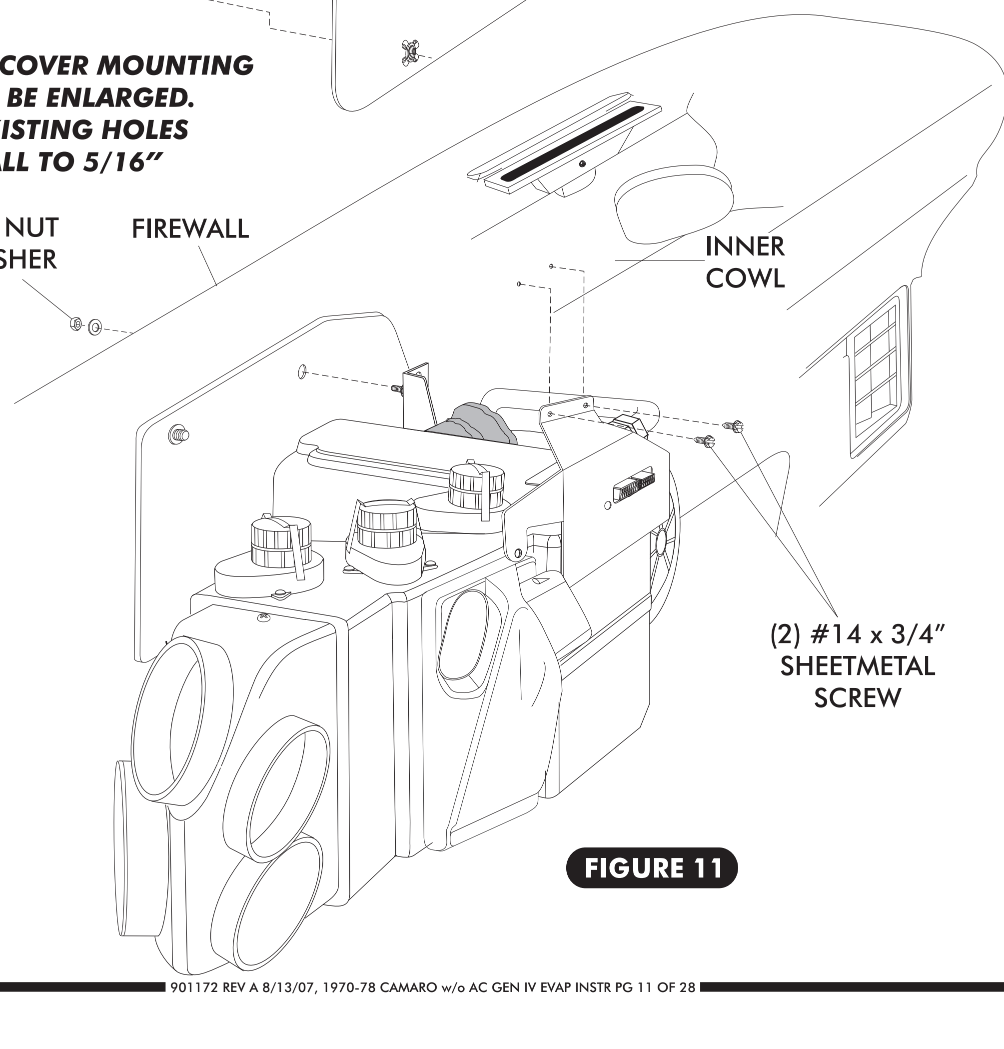


FIGURE 11

DRAIN HOSE INSTALLATION

- ☐ LOCATE EVAPORATOR DRAIN ON BOTTOM OF EVAPORATOR CASE.
- ☐ IN-LINE WITH THE DRAIN, LIGHTLY MAKE A MARK ON THE FIREWALL. MEASURE ONE INCH DOWN AND DRILL A 5/8" HOLE THROUGH THE FIREWALL. SEE FIGURE 12.
- ☐ INSTALL DRAIN HOSE TO BOTTOM OF EVAPORATOR UNIT AND ROUTE THROUGH FIREWALL. SEE FIGURE 12.

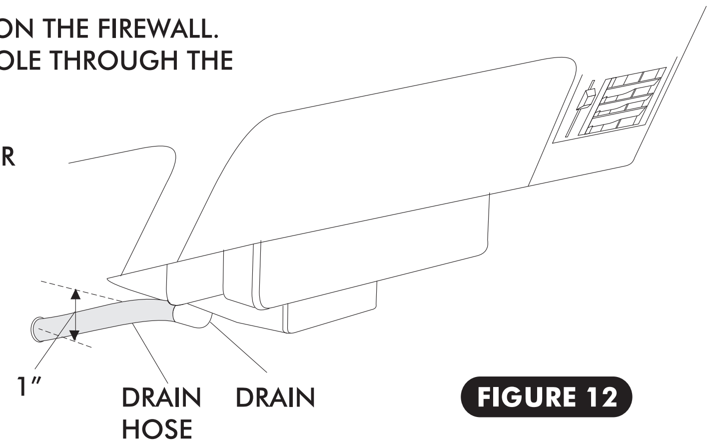


FIGURE 12

FIREWALL CAP INSTALLATION

- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FIREWALL CAP AS SHOWN IN FIGURE 13 BELOW.
- ☐ PASS LINES THROUGH FIREWALL CAP, AND SECURE WITH (3) #10 x ½" HEX SHEETMETAL SCREWS. SEE FIGURE 13 BELOW.
- ☐ INSTALL 3/8 GROMMET SEE FIGURE 13 BELOW.

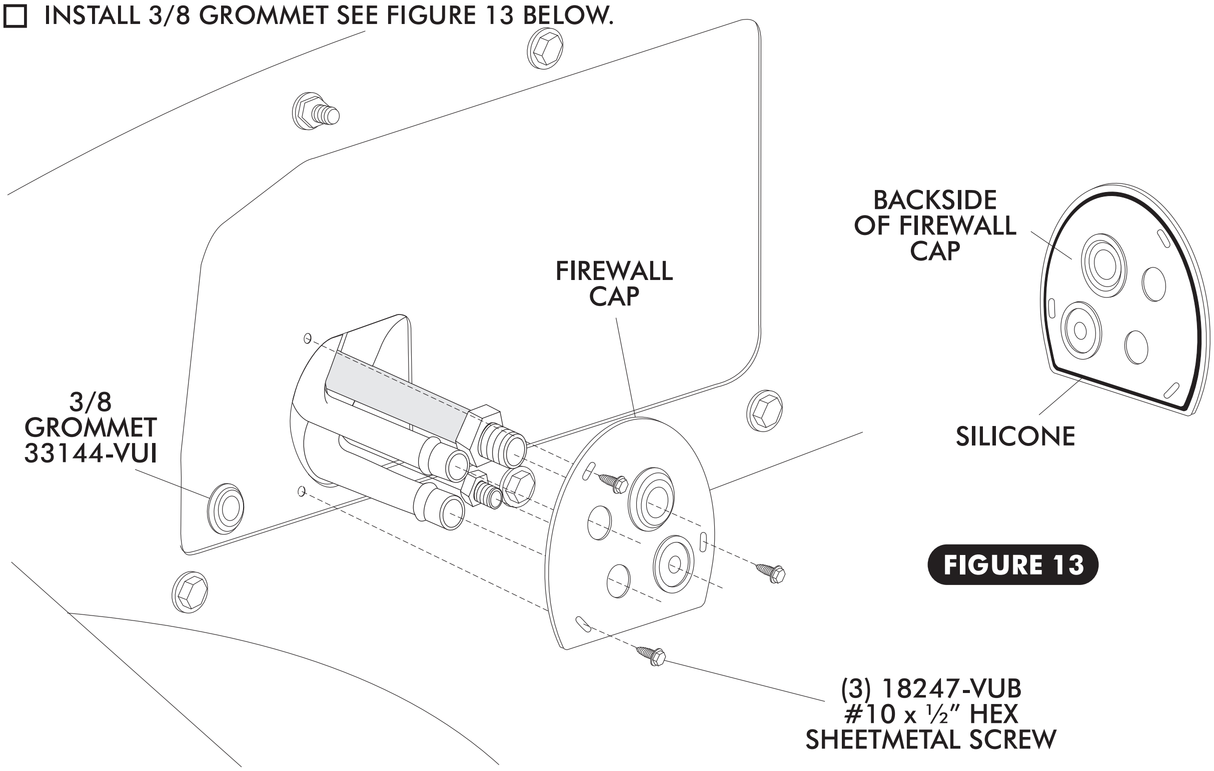


FIGURE 13

VIEW SHOWN FROM ENGINE COMPARTMENT

CENTER LOUVER MOUNTING HOLES

- ☐ CUT OUT TEMPLATE PROVIDED ON PAGE 27. SLIDE THE TEMPLATE UNDER THE DASH AS SHOWN BELOW IN FIGURE 14. ALIGN THE LEFT AND RIGHT SIDE OF TEMPLATE WITH THE CREASE IN THE DASH AS SHOWN BELOW IN FIGURES 14 & 14a. ALIGN BOTTOM EDGE OF THE TEMPLATE ALONG THE BOTTOM EDGE OF DASH AS SHOWN BELOW IN FIGURES 14 & 14a.

- ☐ ONCE TEMPLATE IS ALIGNED CORRECTLY AND TAPED INTO PLACE, MARK MOUNTING HOLES ON DASH. ONCE HOLES ARE MARKED IN THE CORRECT LOCATION REMOVE TEMPLATE AND DRILL (2) 3/16" HOLES IN DASH FOR THE CENTER LOUVER BEZEL. SEE FIGURE 14a BELOW.

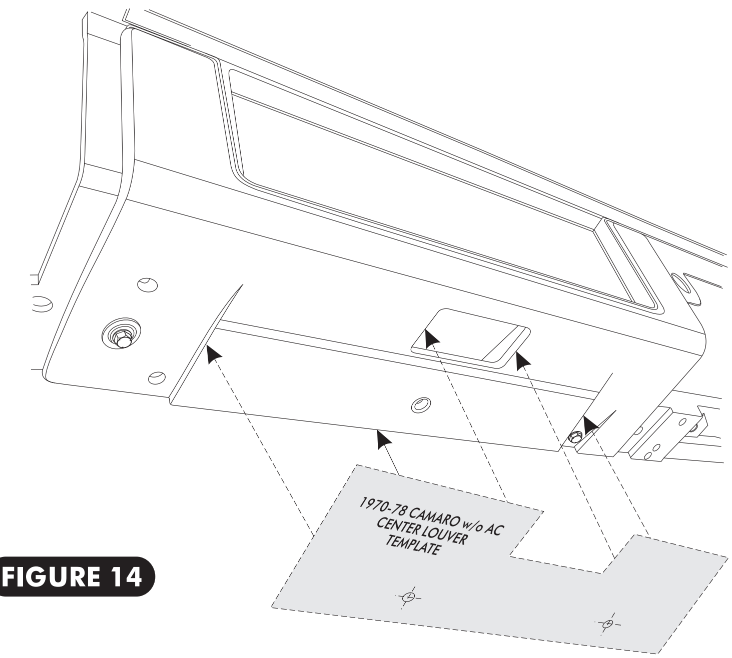


FIGURE 14

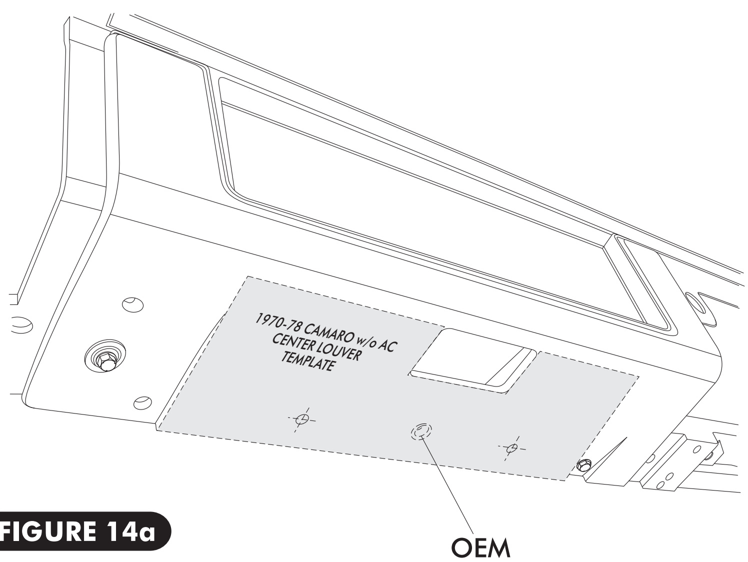


FIGURE 14a

CENTER LOUVER INSTALLATION

- ☐ INSTALL THE CENTER LOUVER BEZEL UNDER THE DASH AND SECURE USING (2) 10/32 x 3/4" PAN HEAD SCREWS w/ WASHER AND10/32 NUT w/STAR WASHER AS SHOWN BELOW IN FIGURE 15.
- ☐ INSTALL THE CENTER LOUVER INTO THE BEZEL AS SHOWN BELOW IN FIGURE 15.
- ☐ REINSTALL CENTER CONSOLE (IF EQUIPPED). SEE FIGURE 15a BELOW.

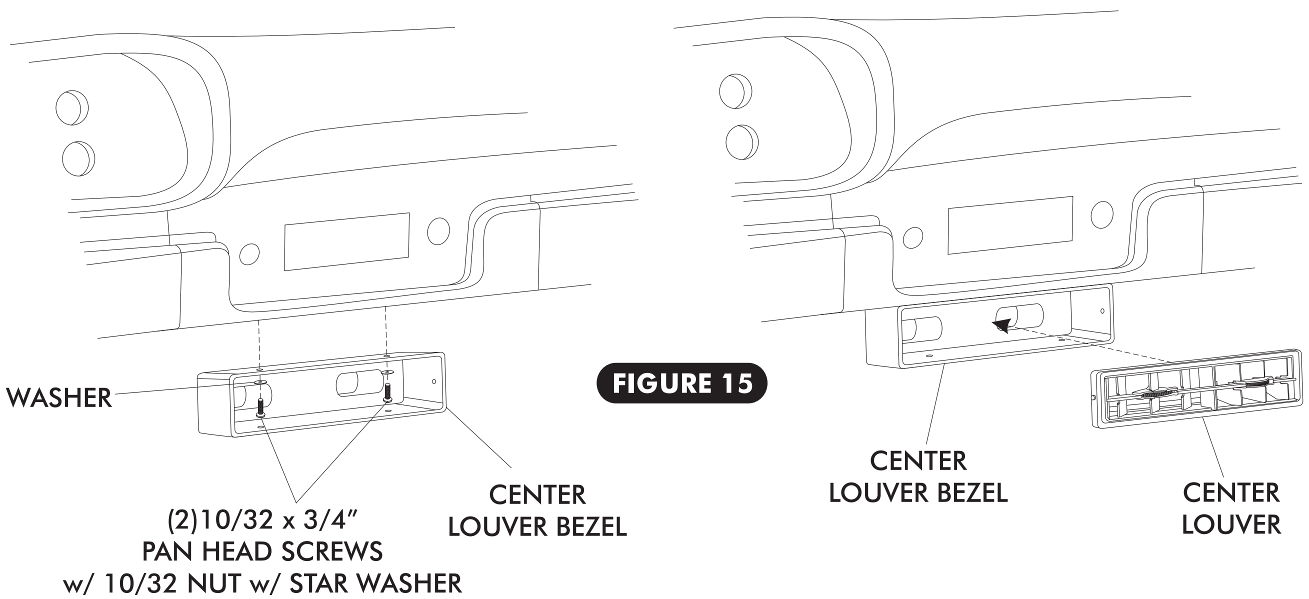


FIGURE 15

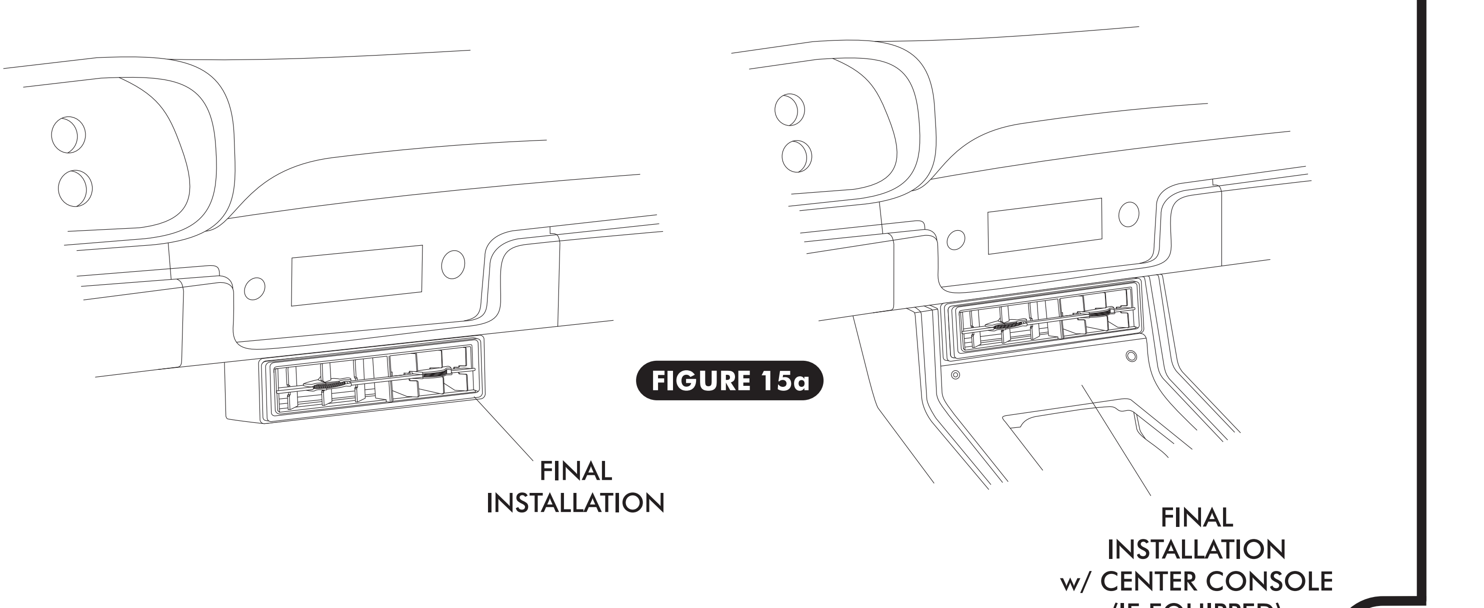


FIGURE 15a

LUBRICATING O-RINGS

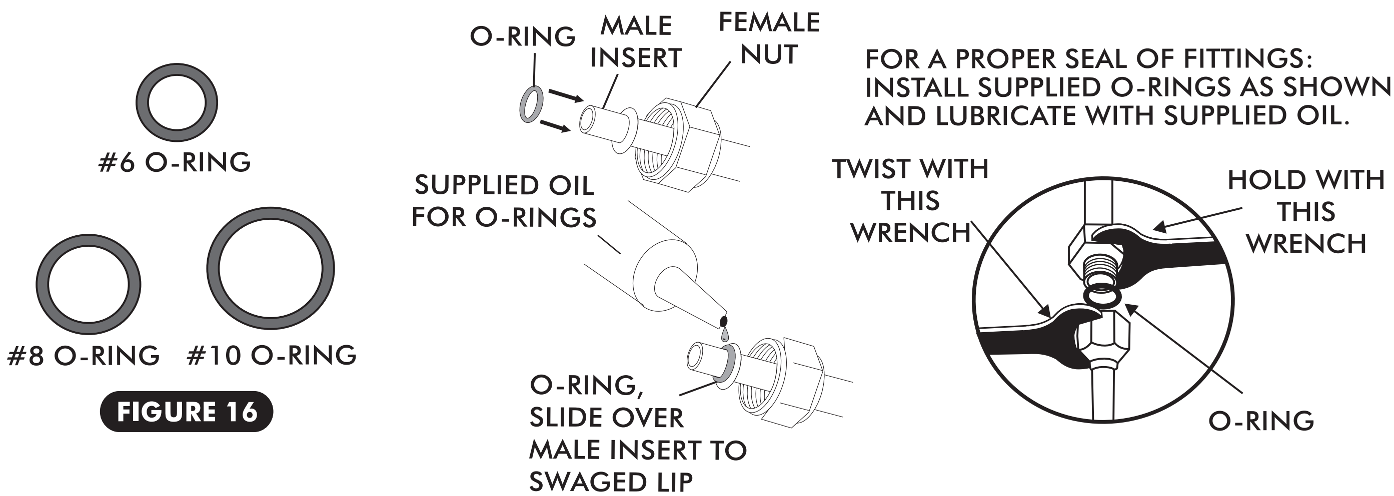


FIGURE 16

STANDARD HOSE KIT

- ☐ LOCATE THE #8 COMPRESSOR A/C HOSE. LUBRICATE (2) #8 O-RINGS (SEE FIGURE 16, ABOVE) AND CONNECT THE 135° w/ 134a SERVICE PORT FITTING TO THE #8 DISCHARGE PORT ON THE COMPRESSOR. ROUTE THE STRAIGHT MALE FITTTING TO THE #8 CONDENSER HARDLINE COMING THROUGH THE RADIATOR CORE SUPPORT. SEE FIGURE 18, PAGE 17. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 16 ABOVE.

- ☐ LOCATE THE #10 COMPRESSOR A/C HOSE. LUBRICATE (2) #10 O-RINGS AND CONNECT THE 135° FITTING TO THE #10 SUCTION PORT ON THE COMPRESSOR, ROUTE THE STRAIGHT FEMALE w/ 134a SERVICE PORT FITTING TO THE #10 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL. SEE FIGURES 17, PAGE 16 & FIGURE 18, PAGE 17. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 16.
  (NOTE: WRAP THE #10 FITTING CONNECTIONS WITH PRESS TAPE. SEE FIGURE 17a, PAGE 16.

- ☐ LOCATE THE #6 EVAP/DRIER HARDLINE AND LUBRICATE (2) #6 O-RINGS AND CONNECT THE HARDLINE TO THE #6 HARDLINE ON FENDERWELL COMING FROM DRIER. ATTACH THE OTHER END OF THE HARDLINE WITH LUBRICATED O-RING TO THE #6 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL. SEE FIGURES 17, PAGE 16 & FIGURE 18, PAGE 17. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 16, ABOVE.

- ☐ USE A #2 ADEL CLAMP TO SECURE THE #6 EVAP/CORE HARDLINE TO THE INNER FENDERWELL AS SHOWN IN FIGURE 18b, PAGE 17. SECURE THE ADEL CLAMP TO THE INNER FENDER USING A 10-32 x ½” PAN HEAD SCREW w/ NUT.

MODIFIED A/C HOSE KIT

- ☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH MODIFIED HOSE KIT.

HEATER HOSE & HEATER CONTROL VALVE INSTALLATION

- ☐ ROUTE HEATER HOSE FROM THE WATER PUMP TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 17, BELOW. SECURE USING HOSE CLAMPS.
- ☐ ROUTE HEATER HOSE FROM THE INTAKE TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 17, BELOW. NOTE: INSTALL HEATER CONTROL VALVE IN-LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE, SECURE USING HOSE CLAMPS AS SHOWN IN FIGURE 17. ***NOTE PROPER FLOW DIRECTION*.**) SECURE THE HEATER HOSE COMING FROM THE INTAKE & THE #6 EVAP HARDLINE TO THE INNER FENDER USING A #4 & #2 ADEL CLAMP. SECURE CLAMPS USING A 10-32 x ½" PAN HEAD SCREW w/ NUT. SEE FIGURE 18b, PAGE 17.

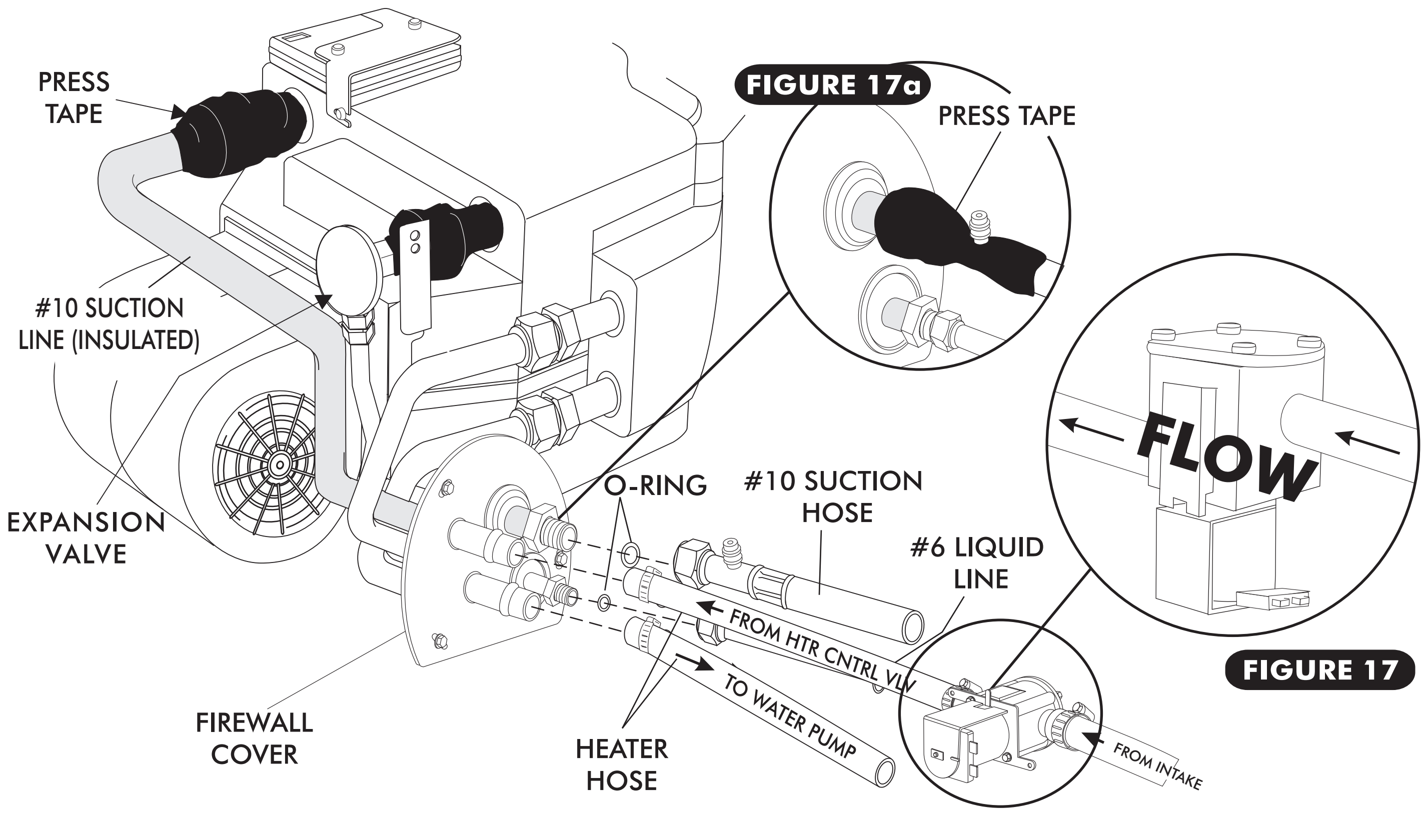
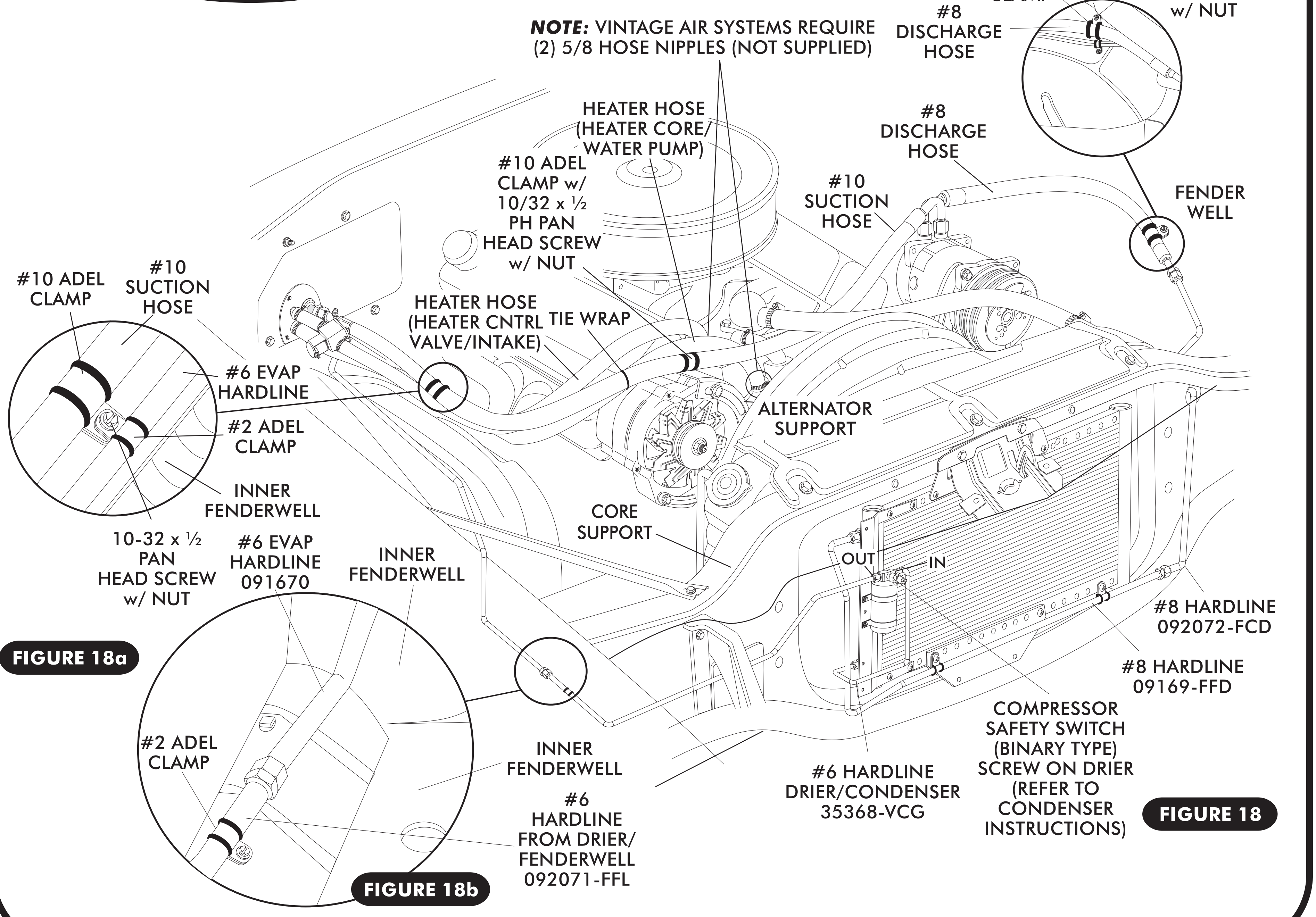


FIGURE 17

AC & HEATER HOSE ROUTING



FINAL STEPS

- ☐ INSTALL DUCT HOSES AS SHOWN IN FIGURE 21, PAGE 19
- ☐ ROUTE A/C WIRES THROUGH 5/8 GROMMET AS SHOWN ON FIGURE 19a (12 VOLT/ GROUND/ BINARY SWITCH/ HEATER VALVE).
- ☐ INSTALL CONTROL PANEL ASM.
- ☐ PLUG THE WIRING HARNESS IN THE ECU MODULE ON SUB CASE AS SHOWN IN FIGURE 21, PAGE 19 (WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 21 & 22.)
- ☐ INSTALL GLOVE BOX (SEE FIGURE 19)
- ☐ REINSTALL ALL PREVIOUSLY REMOVED ITEMS (BATTERY TRAY & BATTERY).
- ☐ FILL RADIATOR WITH AT LEAST A 50/50 MIXTURE OF APPROVED ANTIFREEZE AND DISTILLED WATER.IT IS THE OWNER'S RESPONSIBILITY TO KEEP THE FREEZE PROTECTION AT THE PROPER LEVEL FOR THE CLIMATE IN WHICH THE VEHICLE IS OPERATED. FAILURE TO FOLLOW ANTIFREEZE RECOMMENDATIONS WILL CAUSE HEATER CORE TO CORRODE PREMATURELY AND POSSIBLY BURST IN AC MODE AND/OR FREEZING WEATHER, VOIDING YOUR WARRANTY.
- ☐ DOUBLE CHECK ALL FITTINGS, BRACKETS AND BELTS FOR TIGHTNESS.
- ☐ VINTAGE AIR RECOMMENDS THAT ALL AC SYSTEMS BE SERVICED BY A CERTIFIED AUTOMOTIVE AIR CONDITIONING TECHNICIAN.
- ☐ EVACUATE THE SYSTEM FOR A MINIMUM OF 45 MINUTES PRIOR TO CHARGING AND LEAK CHECK PRIOR TO SERVICING.
- ☐ CHARGE THE SYSTEM TO THE CAPACITIES STATED ON THE INFORMATION PAGE (PAGE 4) OF THIS INSTRUCTION MANUAL.
- ☐ SEE OPERATION OF CONTROLS PROCEDURES PAGE 23.

GLOVE BOX INSTALLATION

- ☐ INSTALL GLOVE BOX PROVIDED, SECURE WITH #8 SCREWS THROUGH OEM HOLES. SEE FIGURE 19.
- ☐ INSTALL GLOVE BOX DOOR.

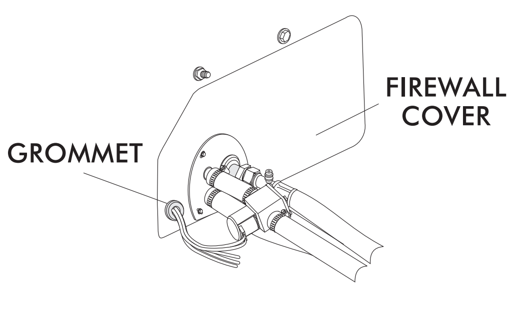


FIGURE 19a

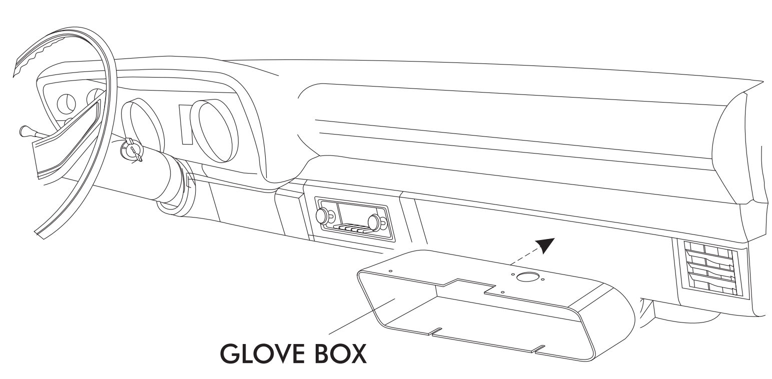


FIGURE 19

CONTROL PANEL & DUCT HOSE ROUTING

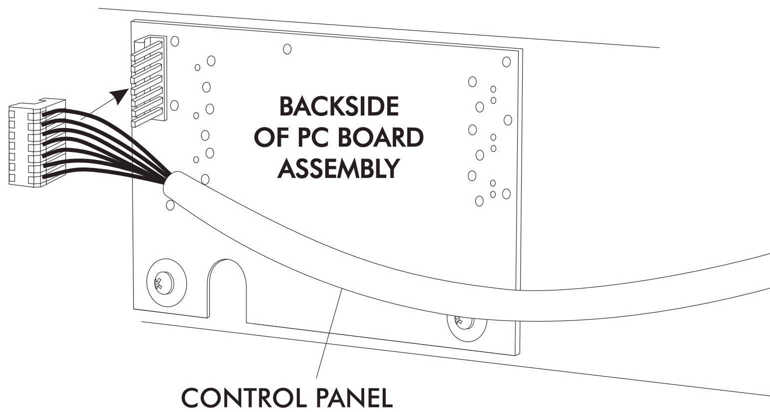


FIGURE 20

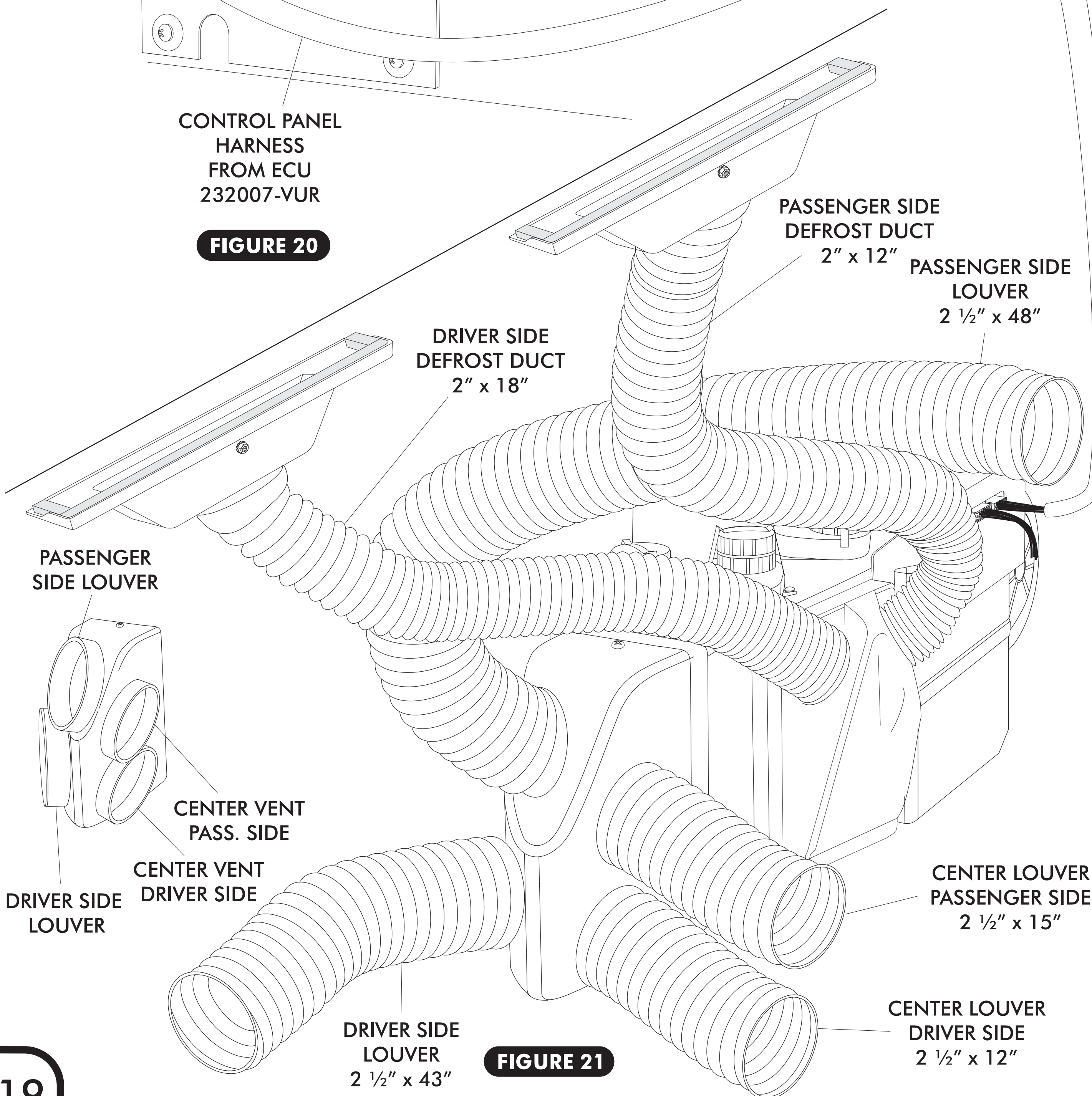


FIGURE 21

EVAPORATOR HARD LINE INSTALLATION

NOTE: AFTER INSTALLING # 10 SUCTION LINE WRAP ALL EXPOSED METAL (FITTINGS & TUBE) WITH SUPPLIED PRESS TAPE.

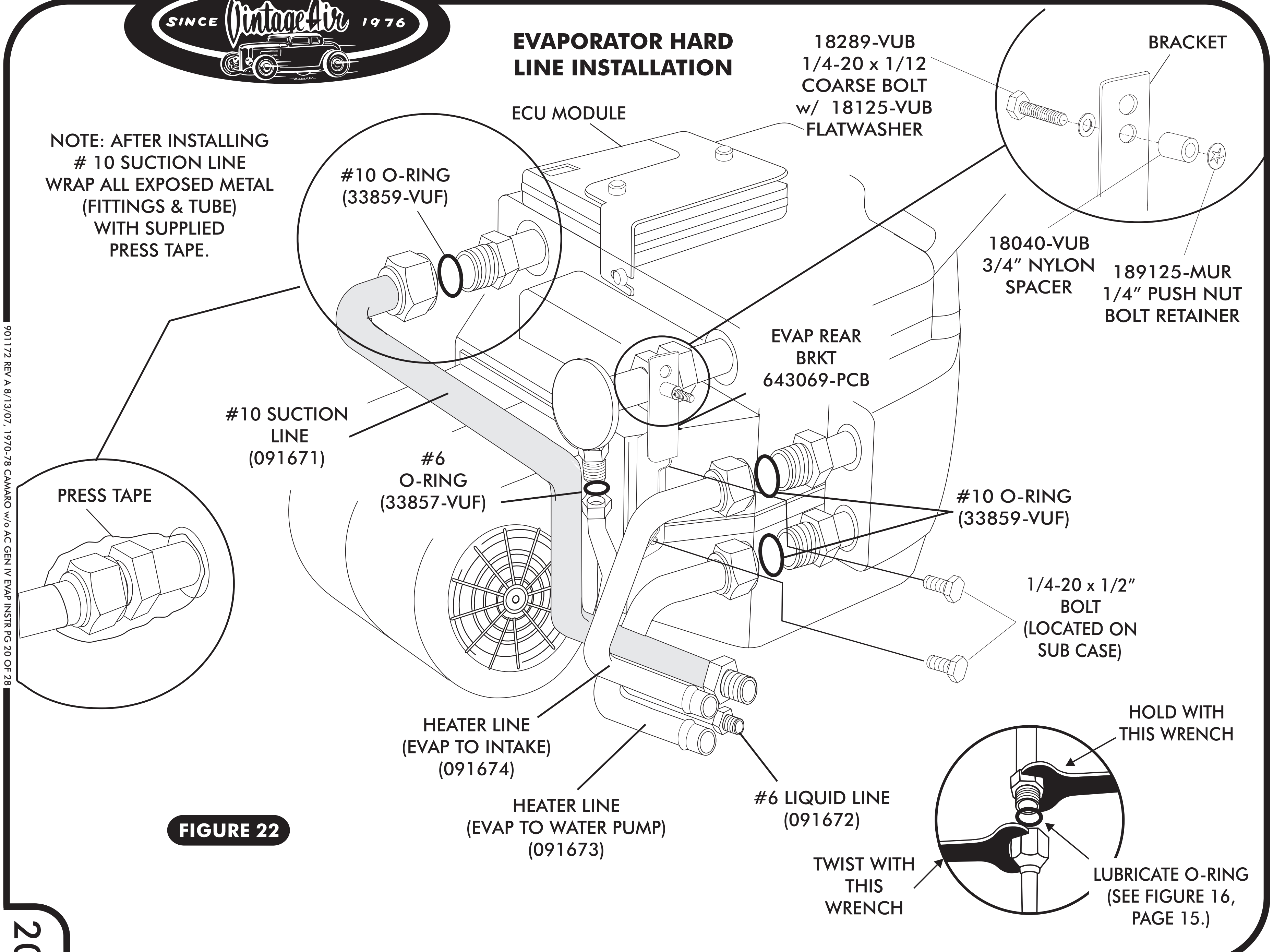
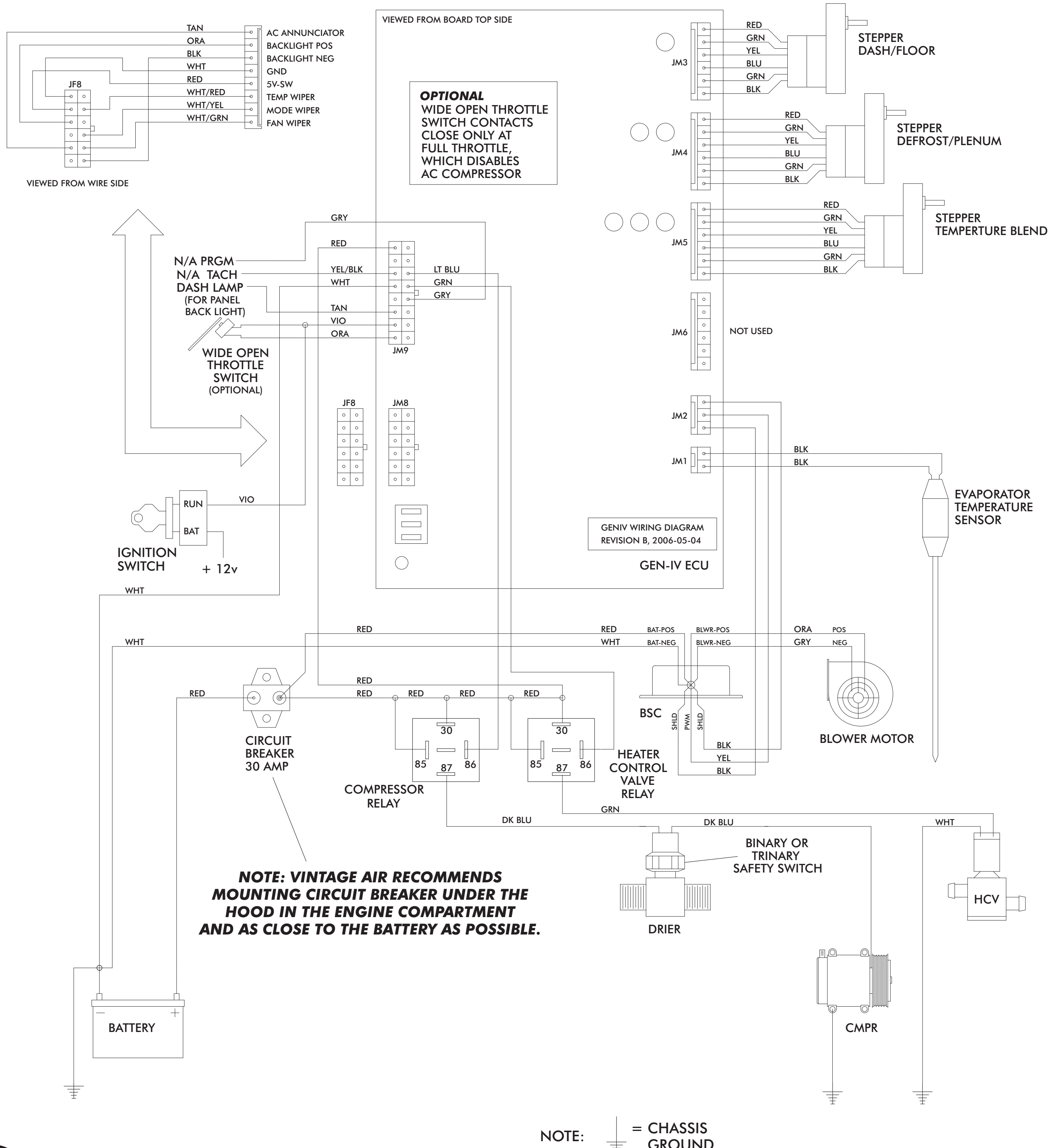
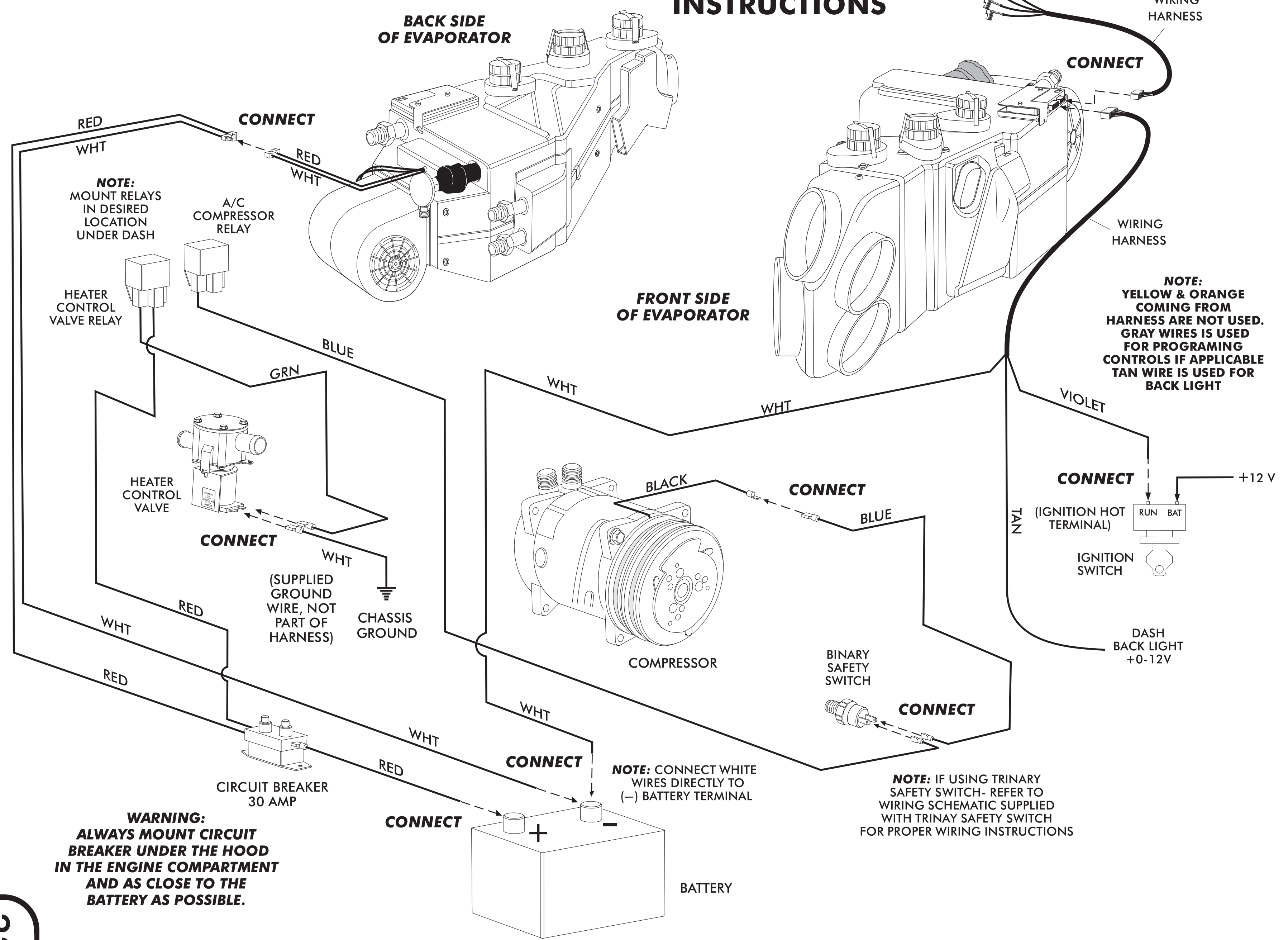


FIGURE 22

WIRING DIAGRAM



GEN IV WIRING CONNECTION INSTRUCTIONS

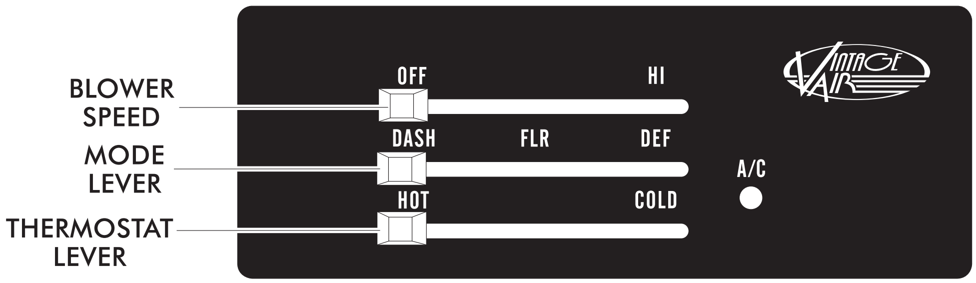


WARNING: ALWAYS MOUNT CIRCUIT BREAKER UNDER THE HOOD IN THE ENGINE COMPARTMENT AND AS CLOSE TO THE BATTERY AS POSSIBLE.

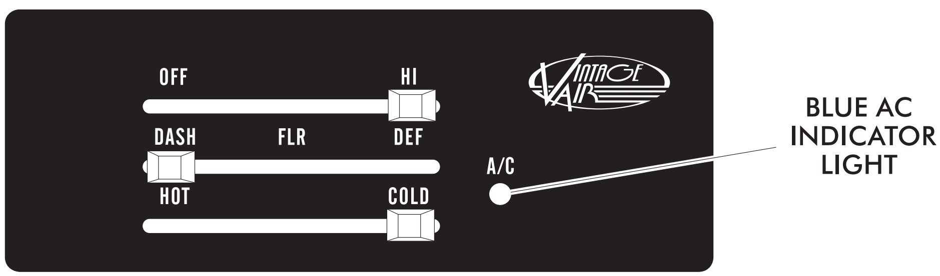
OPERATION OF CONTROLS

NOTE: WHEN BATTERY POWER IS FIRST CONNECTED TO THE ECU, THE COMPUTER GOES THROUGH AN INITIALIZATION SEQUENCE. THIS INITIALIZATION MAY TAKE UP TO 30 SECONDS. A LOW BATTERY OR DISCONNECTING THE BATTERY MAY ALSO TRIGGER A RE-INITIALIZATION. DURING START UP, A LOW BATTERY MAY DROP BELOW 7 VOLTS, TRIGGERING RE-INITIALIZATION.

SYSTEM OFF



A/C MODE

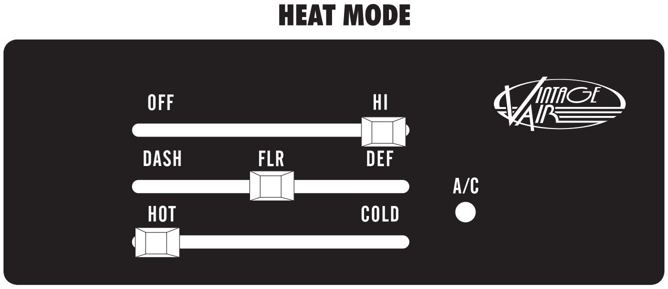


BLOWER SPEED
THIS LEVER CONTROLS THE BLOWER SPEED, FROM OFF TO HI

A/C THERMOSTAT LEVER
IN A/C MODE SLIDE THE THERMOSTAT LEVER ALL THE WAY RIGHT TO THE COLD POSITION, FOR MAXIMUM COOLING. BLUE AC INDICATOR LIGHT WILL COME ON ONLY WHEN AC COMPRESSOR IS ENGAGED
(SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

MODE LEVER
SLIDE THE LEVER TO THE "DASH" POSITION

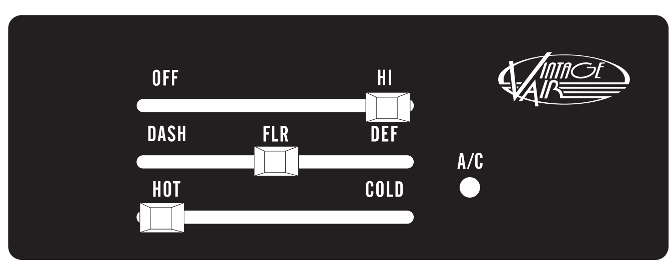
HEAT MODE



A/C THERMOSTAT LEVER
IN HEAT MODE SLIDE THE THERMOSTAT LEVER ALL THE WAY TO THE LEFT TO THE HOT POSITION, FOR MAXIMUM HEATING
(SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

MODE LEVER
SLIDE THE LEVER TO THE "FLR" POSITION (SLIDE THE LEVER TO THE LEFT OR RIGHT, TO ADJUST DESIRED DASH/ FLR/ DEF LOCATION

DEFROST MODE



A/C THERMOSTAT LEVER
IN DEF MODE SLIDE THE THERMOSTAT LEVER ALL THE WAY TO THE LEFT TO THE HOT POSITION, FOR MAXIMUM HEATING
(SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

MODE LEVER
SLIDE THE LEVER TO THE "DEF" POSITION

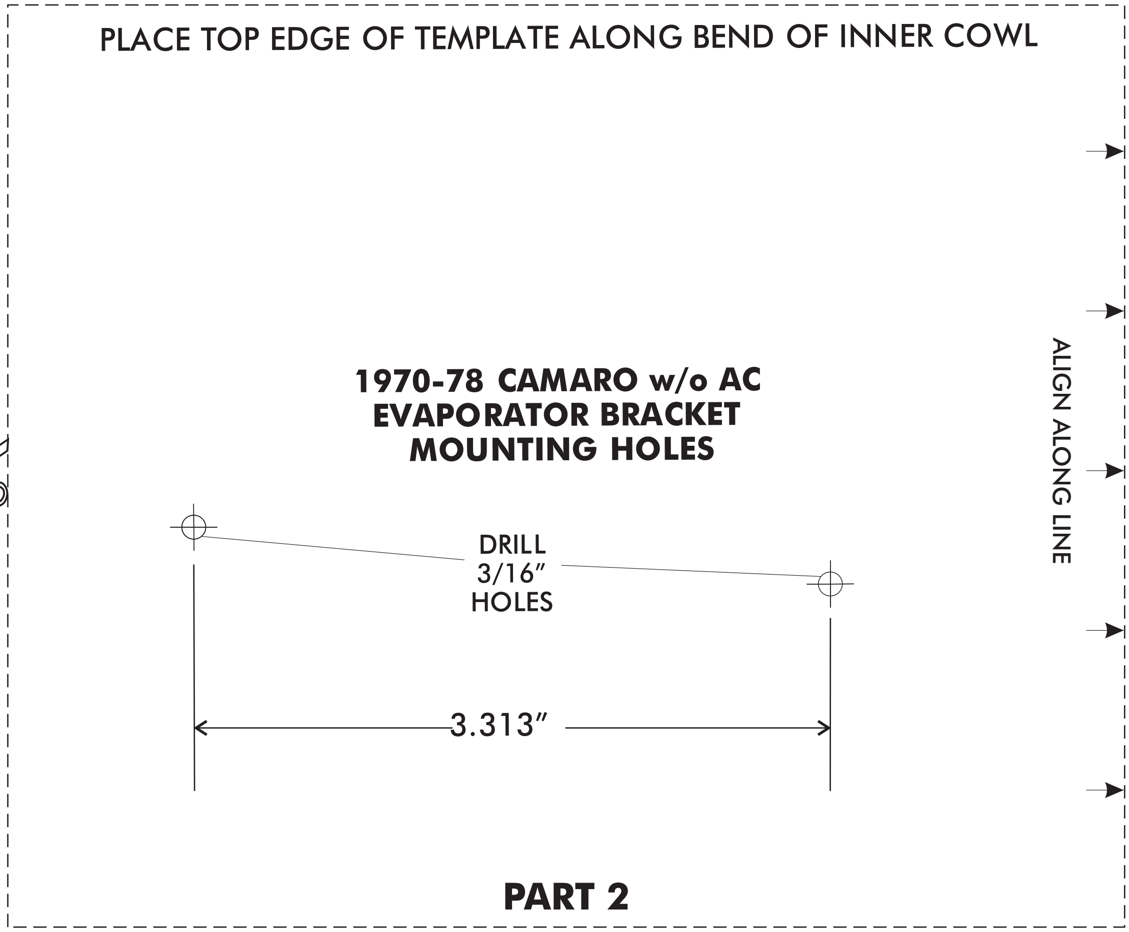
TROUBLE SHOOTING INFORMATION

SYMPTOM	CONDITION	CHECKS	ACTIONS	NOTES
1. BLOWER STAYS ON HIGH SPEED WHEN IGNITION IS ON	NO OTHER FUNCTIONS WORK	CHECK FOR DAMAGED PINS OR WIRES IN CONTROL HEAD PLUG.	VERIFY ALL PINS ARE INSERTED INTO PLUG. INSURE NO PINS ARE BENT OR DAMAGED IN ECU.	
		CHECK FOR DAMAGED GROUND WIRE (WHITE) IN CONTROL HEAD HARNESS.	VERIFY CONTINUITY TO CHASSIS GROUND WITH WHITE CONTROL HEAD WIRE AT VARIOUS POINTS.	LOSS OF GROUND ON THIS WIRE WILL RENDER CONTROL HEAD INOPERABLE
	ALL OTHER FUNCTIONS WORK	CHECK FOR DAMAGED BLOWER SWITCH OR POT AND ASSOCIATED WIRING.		SEE BLOWER SWITCH CHECK PROCEDURE (CONTACT VINTAGE AIR TECH SUPPORT)
BLOWER STAYS ON HIGH SPEED WHEN IGNITION IS ON OR OFF.		UN-PLUG 3 WIRE BSC CONTROL CONNECTOR FROM ECU. IF BLOWER SHUTS OFF, ECU IS EITHER IMPROPERLY WIRED, OR DAMAGED.	BE SURE SMALL, 20GA. WHITE GROUND WIRE IS CONNECTED TO THE BATTERY GROUND POST. IF IT IS, REPLACE ECU.	
		UN-PLUG 3 WIRE BSC CONTROL CONNECTOR FROM ECU. IF BLOWER STAYS RUNNING, THE BSC IS EITHER IMPROPERLY WIRED, OR DAMAGED.	CHECK TO INSURE THAT NO BSC WIRING IS DAMAGED OR SHORTED TO VEHICLE GROUND. THE BSC OPERATES THE BLOWER BY GROUND SIDE PWM SWITCHING. THE POSITIVE WIRE TO THE BLOWER WILL ALWAYS BE HOT. IF THE "GROUND" SIDE OF THE BLOWER IS SHORTED TO CHASSIS GROUND, THE BLOWER WILL RUN ON HI.	
			REPLACE BSC. (THIS WILL REQUIRE EVAPORATOR TO BE REMOVED FROM VEHICLE.)	NO OTHER PART REPLACEMENTS SHOULD BE NECESSARY.
2. COMPRESSOR WILL NOT TURN ON (ALL OTHER FUNCTIONS WORK)	SYSTEM IS NOT CHARGED	SYSTEM MUST BE CHARGED FOR COMP. TO ENGAGE.	CHARGE SYSTEM OR BYPASS PRESSURE SWITCH .	***DANGER- NEVER BYPASS SAFETY SWITCH WITH ENGINE RUNNING, SERIOUS INJURY CAN RESULT***
	SYSTEM IS CHARGED	CHECK FOR FAULTY A/C POT OR ASSOC. WIRING	CHECK CONTINUITY TO GROUND ON WHITE CONTROL HEAD WIRE. CHECK FOR 5V ON RED CONTROL HEAD WIRE.	TO CHECK FOR PROPER POT FUNCTION, CHECK VOLTAGE AT WHITE/BLUE WIRE. VOLTAGE SHOULD BE BETWEEN 0 AND 5V, AND WILL VARY WITH POT LEVER POSITION.
		CHECK FOR DISCONNECTED OR FAULTY THERMISTOR.	CHECK TWO PIN CONNECTOR AT ECU HOUSING.	DISCONNECTED OR FAULTY THERMISTOR WILL CAUSE COMPRESSOR TO BE DISABLED.
		(CHECK FOR FAULTY PRESSURE SWITCH)	CHECK CONTINUITY ACROSS SWITCH	REPLACE SWITCH
3. COMPRESSOR WILL NOT TURN OFF (ALL OTHER FUNCTIONS WORK)		CHECK FOR FAULTY A/C POT OR ASSOC. WIRING	REPAIR/REPLACE POT/CONTROL WIRING	RED WIRE @ A/C POT SHOULD HAVE APPROX. 5V WITH IGNITION ON. WHITE WIRE WILL HAVE CONTINUITY TO CHASSIS GROUND, WHITE/BLUE WIRE SHOULD VARY BETWEEN 0V AND 5V WHEN LEVER IS MOVED UP AND DOWN.
		CHECK FOR FAULTY A/C RELAY	REPLACE RELAY	
		FOR '55-56 CHEV. CHECK FOR PROPER PANEL CONVERSION. CONTROL LEVERS SHOULD TRAVEL TO WITHIN 1/8" OF BOTH ENDS OF THE SLOTS.	REFER TO INTSRUCTIONS "'55-56 CONTROL PANEL CONVERSION REV B 6 17 05" PDF OR 903055-PCA REV C 8/10/05 OR LATER INSRUCTION MANUAL.	EARLY INSTRUCTIONS ON '55-56 CHEV. DID NOT INCLUDE PANEL MOD PROCEEDURE FOR CONTROL WITH LOWER POT BRACKET OFFSET BACK FROM CASTING. IF LEVERS ONLY TRAVEL 2/3 TO 3/4 UP, THIS PROCEEDURE MUST BE PERFORMED
			REPLACE ECU.	

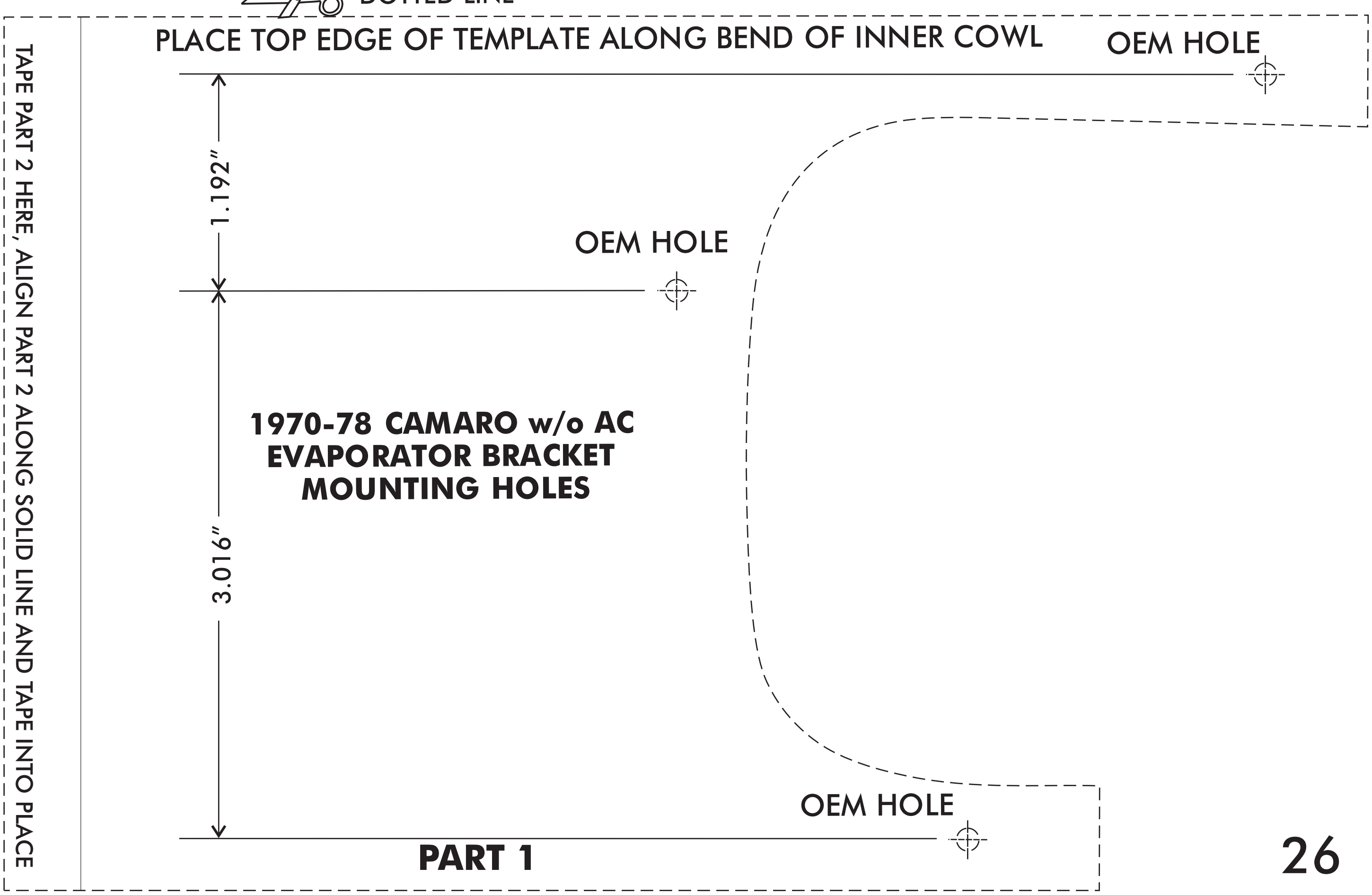
TROUBLE SHOOTING INFORMATION CONT.

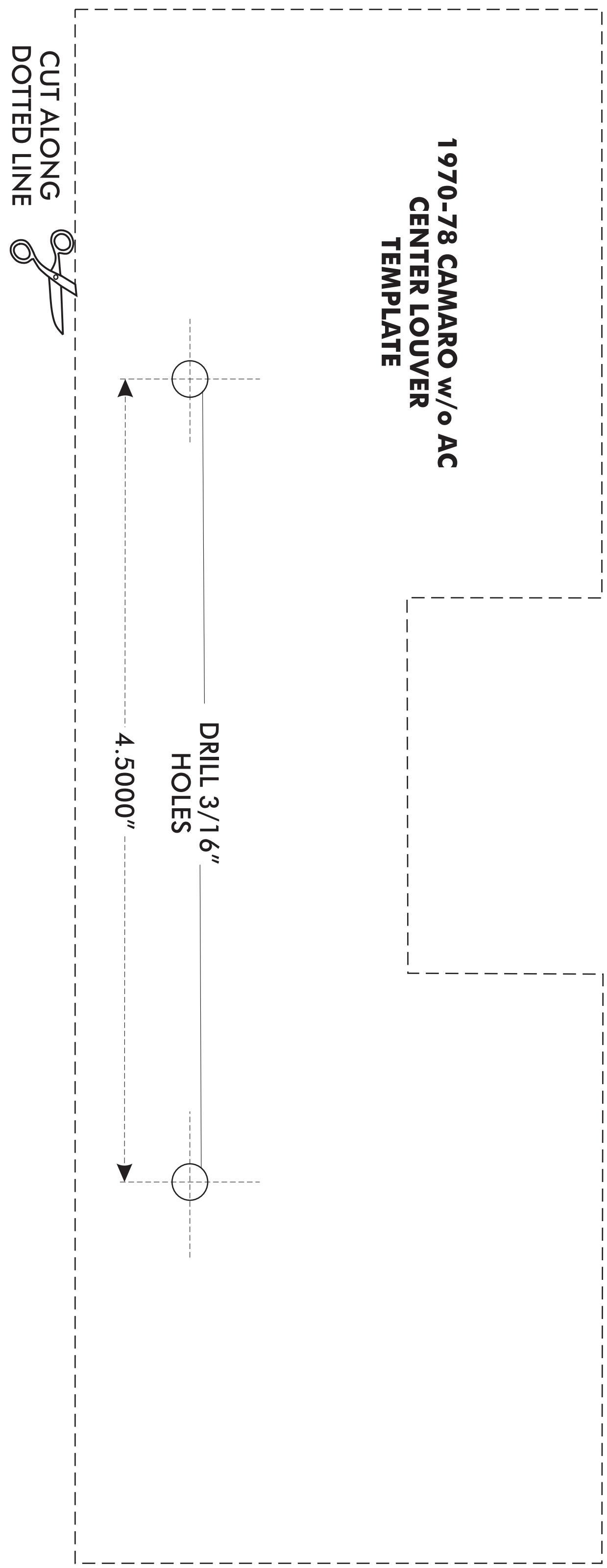
4. SYSTEM WILL NOT TURN ON OR RUNS INTERMITTENTLY	WORKS WHEN ENGINE IS NOT RUNNING, SHUTS OFF WHEN ENGINE IS STARTED. (TYPICALLY EARLY GEN 4, BUT POSSIBLE ON ALL VERSIONS)	NOISE INTERFERENCE FROM EITHER IGNITION OR ALTERNATOR.	INSTALL CAPACITORS ON IGN. COIL, AND ALTERNATOR. ENSURE GOOD GROUND AT ALL POINTS.RE-LOCATE COIL AND ASSOCIATED WIRING AWAY FROM ECU AND ECU WIRING. CHECK FOR BURNED OR LOOSE PLUG WIRES.	IGNITION NOISE (RADIATED OR CONDUCTED) WILL CAUSE THE SYSTEM TO SHUT DOWN DUE TO HIGH VOLTAGE SPIKES. IF THIS IS SUSPECTED, CHECK WITH A QUALITY OSCILISCOPE. SPIKES GREATER THAN 16V WILL SHUT DOWN ECU. INSTALL A RADIO CAPACITOR AT THE POSITIVE POST OF THE IGNITION COIL (SEE RADIO CAPACITOR INSTALLATION BULLETEN). A FAULTY ALTERNATOR OR WORN OUT BATTERY CAN ALSO RESULT IN THIS CONDITION. BATTERY MUST BE IN GOOD CONDITION FOR ALTERNATOR REGULATOR TO FUNCTION PROPERLY.
	WILL NOT TURN ON UNDER ANY CONDITIONS	VERIFY CONNECTIONS ON POWER LEAD, IGNITION LEAD, AND BOTH WHITE GROUND WIRES.	CHECK FOR POSITIVE POWER AT HEATER VALVE GREEN WIRE. AND BLOWER RED WIRE. CHECK FOR GROUND ON CONTROL HEAD WHITE WIRE.	
		VERIFY BATTERY VOLTAGE IS GREATER THAN 10 VOLTS AND LESS THAN 16.	VERIFY PROPER METER FUNCTION BY CHECKING A KNOWN GOOD BATTERY'S VOLTAGE.	
5. LOSS OF MODE DOOR FUNCTION	NO MODE CHANGE AT ALL	CHECK FOR DAMAGED MODE SWITCH OR POT AND ASSOCIATED WIRING		
	PARTIAL FUNCTION OF MODE DOORS	CHECK FOR OBSTRUCTED OR BINDING MODE DOORS		TYPICALLY CAUSED BY EVAPORATOR HOUSING INSTALLED IN A BIND IN THE VEHICLE. BE SURE ALL MOUNTING LOCATIONS LINE UP AND DON'T HAVE TO BE FORCED INTO POSITION.
		CHECK FOR DAMAGED STEPPER MOTOR OR WIRING		
6. BLOWER TURNS ON AND OFF RAPIDLY	BATTERY VOLTAGE IS AT LEAST 12V	CHECK FOR AT LEAST 12V BETWEEN GREEN HEATER VALVE WIRE AND CHASSIS GROUND.	INSURE ALL SYSTEM GROUNDS AND POWER CONNECTIONS ARE CLEAN AND TIGHT.	
	BATTERY VOLTAGE IS LESS THAN 12V	CHECK FOR FAULTY BATTERY OR ALTERNATOR	CHARGE BATTERY	SYSTEM SHUTS OFF BLOWER AT 10V. POOR CONNECTIONS OR WEAK BATTERY CAN CAUSE SHUT DOWN AT UP TO 11V
7. ERATIC FUNCTIONS OF BLOWER, MODE, TEMP, ETC.		CHECK FOR DAMAGED SWITCH OR POT AND ASSOCIATED WIRING	REPAIR OR REPLACE	
8. WHEN THE IGNITION IS TURNED ON, THE BLOWER MOMENTARILY COMES ON, THEN SHUTS OFF. THIS IS WITH THE BLOWER SWITCH IN THE OFF POSITION.		THIS IS AN INDICATOR THAT THE SYSTEM HAS BEEN RE-SET. BE SURE THE RED POWER WIRE IS ON THE BATTERY POST AND NOT ON A SWITCHED SOURCE. ALSO, IF THE SYSTEM IS PULLED BELOW 7V EVEN FOR A SPLIT SECOND, THE SYSTEM WILL RE-SET.	RUN RED POWER WIRE DIRECTLY TO BATTERY.	
9. BACKLIGHTING ON CONTROL PANEL ALWAYS ON.	VINTAGE AIR SUPPLIED PANELS ONLY.	TAN WIRE IN MAIN HARNESS IS NOT CONNECTED TO 0-12V GAUGE BACK LIGHT WIRE.	CONNECT TO GAUGE BACK LIGHT WIRE (0-12V) WHICH WHICH CONTROLS DIMMING OF PANEL BACK LIGHT	TAN WIRE IS ONLY USED ON SYSTEMS WITH ENTIRE CONTROL PANEL SUPPLIED BY VINTAGE AIR.
10. BACKLIGHTING ON CONTROL PANEL ALWAYS OFF.	VINTAGE AIR SUPPLIED PANELS ONLY.	TAN WIRE IN MAIN HARNESS NOT CONNECTED.	CONNECT TO GAUGE BACK LIGHT WIRE (0-12V) WHICH WHICH CONTROLS DIMMING OF PANEL BACK LIGHT	

CUT ALONG DOTTED LINE



CUT ALONG DOTTED LINE




CUT ALONG
DOTTED LINE
1970-78 CAMARO w/o AC
CENTER LOUVER
TEMPLATE
DRILL 3/16"
HOLES
4.5000"

1970-78 CHEVY CAMARO *w/o AC GEN IV*

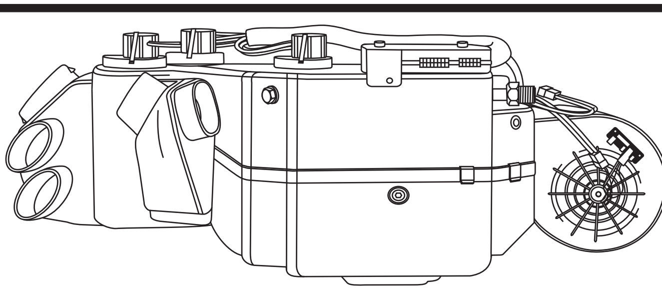
EVAPORATOR KIT 561170

EVAPORATOR KIT PACKING LIST

No.	QTY.	PART No.	DESCRIPTION	
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2.	1	781171	1970-78 CAMARO w/o AC GEN IV ACC. KIT	________

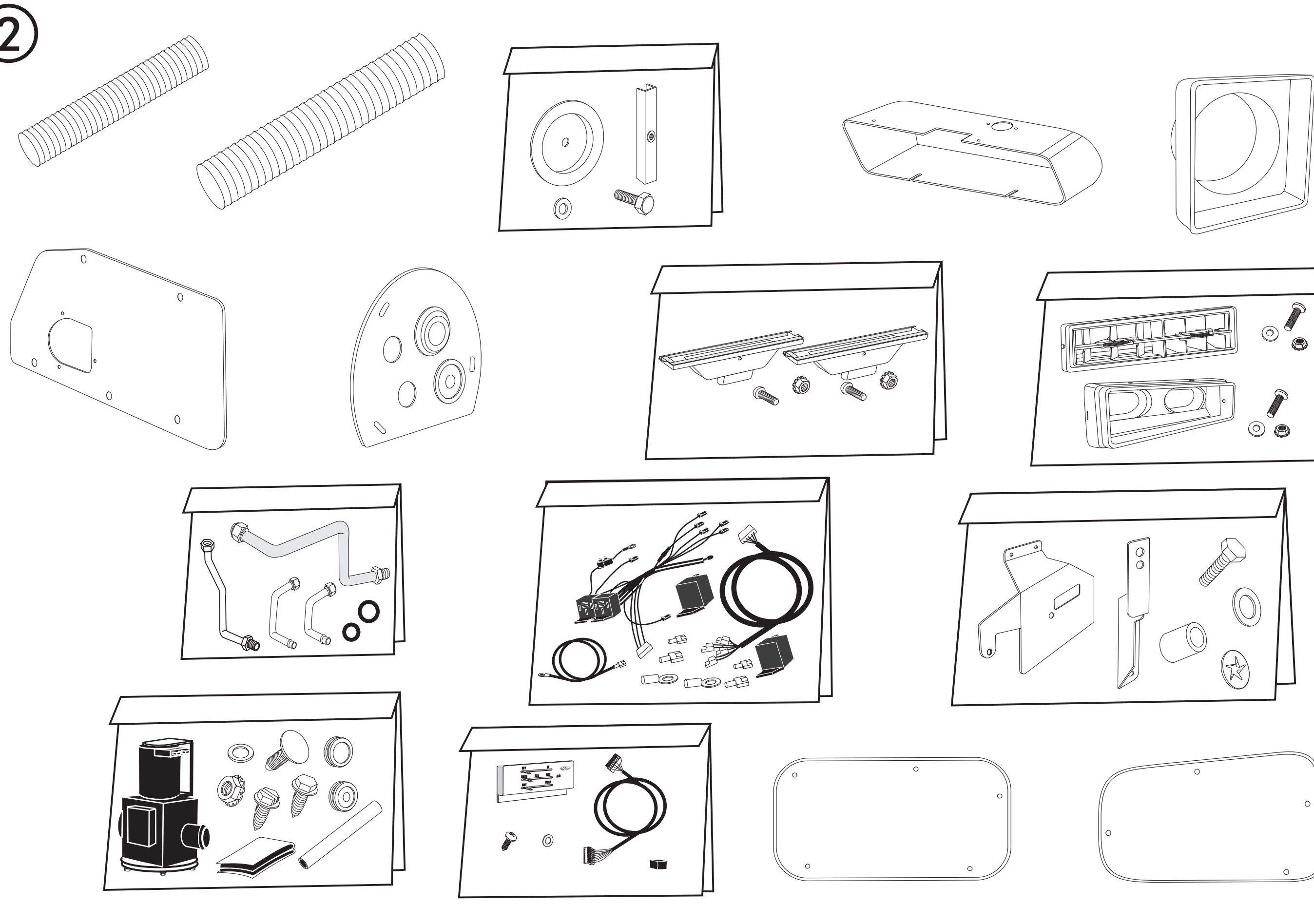
CHECKED BY: ____________
PACKED BY: ____________
DATE: ____________

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GEN IV 4 VENT
EVAP. SUB CASE
744004-VUE

②



ACCESSORY KIT
781171

NOTE: IMAGES MAY NOT DEPICT ACTUAL PARTS AND QUANTITIES.
REFER TO PACKING LIST FOR ACTUAL PARTS AND QUANTITIES